November 27, 2018

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REFERENCE: Contract W9133L-14-D-0007, Delivery Order 0011, FY17 Phase III

Regional Site Inspections for Perfluorinated Compounds at Multiple

**Air National Guard Installations** 

**SUBJECT:** Final Site Inspection Report for Kingsley Field ANGB

Mr. Crow

Attached please find the above referenced document.

Should you have any questions, please contact me at 606.495.5149 or by email at vestm@leidos.com.

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# SITE INSPECTION REPORT FOR PERFLUOROOCTANE SULFONATE AND PERFLUOROOCTANOIC ACID AT KINGSLEY FIELD KLAMATH FALLS, OREGON



173<sup>rd</sup> Fighter Wing Oregon Air National Guard Kingsley Field Klamath Falls, Oregon

**November 2018** 



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173<sup>rd</sup> Fighter Wing Oregon Air National Guard Kingsley Field Klamath Falls, Oregon

November 2018

Contract Number W9133L-14-D-0007 Task Order Number 0011

Prepared for

Air National Guard Restoration Branch NGB/A4OR 3501 Fetchet Avenue Joint Base Andrews, Maryland 20762

Prepared by

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# **ACRONYMS**

μg/L Micrograms per Liter

AFFF Aqueous Film-Forming Foam
AMSL Above Mean Sea Level
ANG Air National Guard
ANGB Air National Guard Base

BB&E Inc.

BGS Below Ground Surface COC Chemical of Concern

COPC Chemical of Potential Concern
DoD U.S. Department of Defense
DOI U.S. Department of the Interior

DPT Direct Push Technology
DQO Data Quality Objective

EPA U.S. Environmental Protection Agency

FD Fire Department

FETA Fire Department Testing Area
FSS Fire Suppression System
FTA Fire Training Area
FW Fighter Wing
gpm Gallons per Minute
HA Health Advisory

HDPE High-Density Polyethylene HEF High Expansion Foam IDW Investigation-Derived Waste

MS Matrix Spike

MSD Matrix Spike Duplicate
NFA No Further Action
ng/L Nanograms per Liter
PA Preliminary Assessment

PFAS Per- and Polyfluoroalkyl Substances

PFBS Perfluorobutane Sulfonate
PFHpA Perfluoroheptanoic Acid
PFHxS Perfluorohexane Sulfonate
PFNA Perfluorononanoic Acid
PFOA Perfluorooctanoic Acid
PFOS Perfluorooctane Sulfonate
PRL Potential Release Location

QA Quality Assurance QC Quality Control

QSM Quality Systems Manual
RI Remedial Investigation
RPD Relative Percent Difference
RSL Regional Screening Level

SI Site Inspection

TestAmerica Analytical Laboratories, Inc.

UCMR3 Third Unregulated Contaminant Monitoring Rule UFP-QAPP Uniform Federal Policy Quality Assurance Project Plan

USAF U.S. Air Force

U.S. Fish and Wildlife Service **USFWS** 

U.S. Geological Survey Volatile Organic Compound Work Plan USGS VOC

WP

# **EXECUTIVE SUMMARY**

Leidos was contracted to conduct Phase III regional site inspections (SIs) for perfluorinated compounds at multiple Air National Guard Bases (ANGBs). This report documents SI activities conducted at eight potential release locations (PRLs) at the Kingsley Field ANGB, Klamath Falls, Oregon. The primary objective of the SI was to determine the presence or absence of perfluorinated compounds, more specifically per- and polyfluoroalkyl substances (PFAS) on the U.S. Environmental Protection Agency (EPA) Third Unregulated Contaminant Monitoring Rule (UCMR3), including perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) perfluorobutane sulfonate (PFBS), perfluorononanoic acid (PFNA), perfluoroheptanoic acid (PFHpA), and perfluorohexane sulfonate (PFHxS), herein collectively referred to as PFOS/PFOA at each PRL, and based on the findings:

- Determine if PFOS/PFOA-contaminated groundwater has reached the Installation boundary;
- Provide a defensible no further action (NFA) decision for qualifying PRLs; and
- Develop data quality objectives (DQOs) for additional investigation for PRLs not meeting the NFA criteria or an interim response action, if appropriate.

To meet the objectives, Leidos performed SIs at the following eight PRLs:

- PRL 1: Hangar 333,
- PRL 2: Fire Equipment Testing Area (FETA) North,
- PRL 3: FETA South,
- PRL 4: FETA Compass Rose,
- PRL 5: Building 573,
- PRL 6: Current and Former Fire Station Building 216,
- PRL 7: North Outfall, and
- PRL 8: South Outfall.

Based on recommendations from the preliminary assessment (PA) and site visit conducted by BB&E, Inc. (BB&E) in September 2015, soil, groundwater, and surface water and sediment (if available) samples were collected and analyzed from eight PRLs. Collected samples were analyzed for PFOS/PFOA compounds. Oregon has established initiation level for four of the six UCMR3 compounds (PFOS, PFOA, PFHpA, and PFNA) in surface water which are to be considered guidance only. Oregon does not have criteria for soil, sediment, or groundwater. The detected PFOS/PFOA concentrations were compared against the more conservative screening criteria for PFOS, PFOA, and PFBS, including the EPA lifetime drinking water Health Advisory (HA) for PFOS and PFOA, the EPA Regional Screening Level (RSL) for PFBS in tap water, the EPA RSL for PFBS in residential soil, and calculated screening levels using the EPA screening level calculator for PFOS and PFOA in soil, as shown in Table ES-1.

PFOS/PFOA compounds were detected above the laboratory detection limits in the soil, groundwater, sediment, and surface water samples collected during the SI. Samples from five monitoring wells (MW-KLA01-01, MW-KLA03-01, MW-KLA04-01, MW-KLA06-01, MW-572-02-PRL05) located near the Installation boundary indicates detection of all six PFOS/PFOA compounds in the groundwater samples. The screening results indicate the consistent presence of PFOS and PFOA at concentrations exceeding the 70-nanograms per liter (ng/L) EPA drinking water HA (EPA 2016a and 2016b) near the Installation boundary.

ES-1

Table ES-1. PFOS/PFOA SI Screening Criteria

Parameter	Chemical Abstract Service Number	EPA RSL for Tap Water <sup>a</sup> (ng/L)	EPA Health Advisory <sup>b</sup> (ng/L)	Residential Risk-based Soil Screening Level <sup>c</sup> (µg/kg)
PFOS	1763-23-1	NA	70.0 <sup>d</sup>	1,260
PFOA	335-67-1	NA		1,260
PFBS	375-73-5	400,000°	NA	1,260,000

<sup>&</sup>lt;sup>a</sup> EPA RSL for tap water, May 2018; target HQ =1.

μg/kg = Micrograms per kilogram.

EPA = U.S. Environmental Protection Agency.

NA = Not available.

ng/L = Nanograms per liter.

PFBS = Perfluorobutane sulfonate.

PFOA = Perfluorooctanoic acid.

PFOS = Perfluorooctane sulfonate.

RSL = Regional screening level.

SI = Site inspection.

Based on comparison of analytical data to the screening criteria in Table ES-1, Leidos recommends further investigations at all PRLs. Additional investigations are recommended for soil and groundwater at PRLs 1, 2, 3, 4, 5, and 6 and for sediment and surface water at PRLs 7 and 8. The recommendations are summarized in Table ES-2 and described briefly below:

- Further investigation is necessary to determine the nature and extent of PFOS/PFOA contamination due to detectable levels at all PRLs.
- Develop an expanded conceptual site model that considers localized groundwater and surface water flow paths to select future sampling locations.
- Complete the delineation of nature and extent of PFAS as part of an Expanded SI or a remedial investigation (RI) that could consist of:
  - Additional soil and sediment sampling and analysis of an expanded list of PFAS constituents (in addition to the six UCMR3 constituents) to determine if significant source areas related to precursor substances are present. Precursor substances have been demonstrated to oxidize into PFOS and PFOA, and thus could provide a lingering source of these compounds to soil and groundwater.
  - Expanded groundwater sampling program (including analysis of an expanded list of PFAS constituents) to complete horizontal and vertical delineation of the PFOS/PFOA impacts. Further groundwater investigation at the Base boundary is recommended due to the presence of PFAS in groundwater above their screening criteria.

<sup>&</sup>lt;sup>b</sup> Drinking Water Health Advisory for Perfluorooctane Sulfonate (EPA 2016a) and Drinking Water Health Advisory for Perfluorooctanoic Acid (EPA 2016b).

<sup>&</sup>lt;sup>c</sup> Residential risk-based soil screening levels determined by using the EPA RSL calculator (https://epa-prgs.ornl.gov/cgibin/chemicals/csl\_search) and the May 2018 EPA RSL tables (https://epa.gov/risk/regional-screening-levels-rsls-generic-tables- $\frac{\text{may-2018}}{\text{d}}$  for soil and sediment; target HQ = 1.

<sup>70-</sup>ng/L health advisory value.

<sup>&</sup>lt;sup>e</sup> PFBS analytical results for groundwater and surface water have been compared to the tap water screening levels; target HQ =1.

- The installation and sampling of upgradient monitoring wells and downgradient off-Base monitoring wells to better define the upgradient source of PFOS/PFOA as well as impacts of PFOS/PFOA that have migrated off Base.
- o The sampling of upgradient and downgradient off-Base surface water and sediment (including analysis of an expanded list of PFAS constituents) to determine if an upgradient source of PFOS/PFOA exists and better define the nature and extent of PFOS/PFOA in surface water that have migrated off Base.
- Conduct preliminary site-specific risk assessment calculations in order to identify chemicals of potential concern (COPCs) in every media and establish preliminary remedial goals for screening purposes.

DQOs are proposed based on the results of the SI and are presented in Table ES-2. In general, additional samples are required at each PRL in order to establish the nature and extent of PFOA/PFOS constituents for each applicable medium and determine if a complete receptor pathway exists. For soil additional samples are proposed to delineate the nature and extent and to determine if a source area exists, and if so, the vertical and horizontal extent for both the vadose and saturated zones. Additional surface water and sediment samples should be collected at PRLs 7 and 8.

Table ES-2. SI Recommendation Summary Table

PRL No.	PRL Description	Constituents Above Screening Criteria	Sampling Recommendations and Objectives
	Hangar 333	<b>Groundwater:</b> PFOS + PFOA	<b>Soil:</b> Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration. <b>Groundwater:</b> Although soil screening criteria were not exceeded at PRL 1, there were exceedances in groundwater at the downgradient well MW-KLA01-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
2	FETA – North	<b>Groundwater:</b> PFOS + PFOA	Soil: Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Although soil screening criteria were not exceeded at PRL 2, exceedances occurred in groundwater at downgradient well MW-KLA02-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
3	FETA – South	<b>Groundwater:</b> PFOS + PFOA	Soil: Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Although soil screening criteria were not exceeded at PRL 3, exceedances occurred in groundwater at downgradient well MW-KLA03-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
4	FETA – Compass Rose	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to further define the nature and extent of PFOS soil exceedances and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
\$	Building 573	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to determine the extent of the one PFOS exceedance and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
9	Current and Former Fire Station – Building 216	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to determine the extent of the one PFOS exceedance and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.

Table ES-2. SI Recommendation Summary Table (continued)

PRL No.	PRL Description	Constituents Above Screening Criteria	Sampling Recommendations and Objectives
7	North Outfall	None	<b>Surface Water and Sediment:</b> PFOS/PFOA compounds were detected in sediment below screening criteria. Determine the PFOS/PFOA impact to surface water through additional upgradient sampling of surface water and sediment and evaluate potential downgradient impacts at the outfall located off Base.
&	South Outfall	None	Surface Water and Sediment: PFOS/PFOA compounds were detected in surface water below screening criteria. Determine the PFOS/PFOA impact to surface water through additional upgradient sampling of surface water and sediment and evaluate potential downgradient impacts at the outfall located off Base.
	General		Soil: Collect additional surface and subsurface soil samples to determine the nature and extent both vertically and horizontally of the exceedances and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: (1) Collect additional groundwater samples in upgradient locations to quantify potential impacts from upgradient sources, and (2) collect additional groundwater samples off Base through the installation of a limited number of new monitoring wells to determine if PFOS/PFOA impacts beyond the Base boundary are increasing or decreasing.  Surface Water/Sediment: (1) Collect additional surface water and sediment samples in upgradient locations to quantify potential impacts from upgradient sources; (2) collect additional surface water and sediment samples from downgradient locations off Base to define the nature and extent of PFAS contamination beyond the Base boundary.

FETA = Fire equipment testing area.
PFOA = Perfluorooctanoic acid.
PFOS = Perfluorooctane sulfonate.
PRL = Potential release location.
SI = Site inspection.

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# 1.0 INTRODUCTION

Leidos has prepared this Site Inspection (SI) Report to satisfy the requirements of Task Order 0011 of National Guard Bureau Contract Number W9133L-14-D-0007. Under this Task Order, Leidos was contracted to conduct Phase III regional SIs for perfluorinated compounds at multiple Air National Guard Bases (ANGBs). This report documents SI activities conducted at eight potential release locations (PRLs) at the Oregon Air National Guard (ANG) at Kingsley Field, Klamath Falls, Oregon, herein referred to as Kingsley Field ANGB, the Installation, or the Base (Figure 1). (Note that all figures and tables are presented at the end of the document.) All field activities were conducted in accordance with the Work Plan for Fiscal Year 2017 Phase III Regional Site Inspections for Perfluorooctane Sulfonate and Perfluorooctanoic Acid at Kingsley Field Air National Guard Base, Klamath Falls, Oregon (Leidos 2018).

#### 1.1 PROJECT OBJECTIVES AND SCOPE

The primary objective of the SI was to determine the presence or absence of perfluorinated compounds, more specifically per- and polyfluoroalkyl substances (PFAS) on the U.S. Environmental Protection Agency (EPA) Third Unregulated Contaminant Monitoring Rule (UCMR3), including perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorobutane sulfonate (PFBS), perfluorononanoic acid (PFNA), perfluoroheptanoic acid (PFHpA), and perfluorohexane sulfonate (PFHxS), herein collectively referred to as PFOS/PFOA.

Surface and subsurface soil, groundwater (downgradient from the PRL and near the Installation boundary), and surface water and sediment (if available) were sampled and analyzed to determine the presence or absence of PFOS/PFOA in environmental media at the PRLs identified during the 2015 preliminary assessment (PA) (BB&E 2015) and to:

- Determine if PFOS/PFOA-contaminated groundwater has reached the Installation boundary;
- Provide a defensible no further action (NFA) decision for qualifying PRLs; and
- Develop data quality objectives (DQOs) for additional investigation for PRLs not meeting the NFA criteria or an interim response action if appropriate.

The scope of work consisted of three inter-related tasks: (1) prepare an SI Work Plan (WP), (2) conduct SI and data collection activities, and (3) evaluate data from the field effort and applicable historical information to present conclusions and recommendations in an SI Report.

Sampling of drinking water sources (other than the on-Base potable water supply that was used for decontamination activities) was not included, and determination of nature and extent of any identified contamination was not within the scope of this SI.

Eight PRLs, as listed in Table 1 and depicted in Figure 2, were selected for SI activities based upon the PA and site visit conducted by BB&E, Inc. (BB&E) in September 2015 and reported in the *Perfluorinated Compounds Preliminary Assessment Site Visit Report, 138<sup>th</sup> Fighter Wing, Oklahoma Air National Guard, Kingsley Field, Klamath Falls, Oregon* (BB&E 2015). This SI Report briefly summarizes the PA, describes SI field activities, presents analytical results of environmental sampling, and provides recommendations for each PRL.

#### 1.2 REGULATORY OVERVIEW AND SCREENING CRITERIA

In 2012, EPA published the UCMR3, which required public water supplies across the country to sample for a list of 30 unregulated contaminants, including 6 chemicals of concern (COCs) relevant to this SI (PFOS, PFOA, PFBS, PFNA, PFHpA, and PFHxS; i.e., PFOS/PFOA). Results of UCMR3-required sampling indicated detections of PFOS/PFOA at numerous locations, including several near U.S. Department of Defense (DoD) facilities. PFOS/PFOA detections at DoD facilities are often linked to the use of aqueous film-forming foam (AFFF), which may contain one or more of these chemicals. AFFF is a firefighting agent used to suppress fires involving petroleum hydrocarbons.

Detected concentrations of PFOS/PFOA in environmental samples collected during the Kingsley Field ANGB SI were compared against soil and water screening criteria for PFOS, PFOA, and PFBS, as described below and listed in Table 2.

The May 2018 EPA generic regional screening level (RSL) table lists a residential risk-based screening level for tap water for PFBS of 400 micrograms per liter (μg/L) (400,000 nanograms per liter (ng/L); target hazard quotient = 1). Currently, no legally enforceable federal standards exist for PFOS/PFOA in water. However, under the Safe Drinking Water Act, EPA issued a series of health advisories (HAs) for PFOS/PFOA, including the most recent in May 2016. To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOS/PFOA in drinking water, EPA established an HA level for PFOS and PFOA (combined) of 70 ng/L. The HA of 70 ng/L applies to PFOS and PFOA individually as well as combined. If an individual compound is detected >70 ng/L, the screening criteria are exceeded. However, if individual compounds are <70 ng/L but the sum of the compounds is >70 ng/L, the screening criteria are exceeded. For example, if PFOS = 50 ng/L and PFOA = 25 ng/L, the screening criteria are exceeded. Therefore, screening levels for groundwater and surface water are as follows:

- PFOS and PFOA = 70 ng/L; and
- PFBS = 400,000 ng/L.

There are also no legally enforceable federal standards for PFOS/PFOA in soil or sediment. The May 2018 EPA generic RSL table lists a residential risk-based screening level for soil for PFBS of 1,300,000 µg/kg. Following the process utilized at other ANG Installations around the country, Leidos will use residential risk-based screening levels for soil determined using the EPA RSL calculator and the May 2018 RSL tables. The calculated screening value for PFBS is slightly less than the value listed in the generic RSL table. RSLs are only available for three of the six COCs listed above. The calculated screening levels for these three COCs are as follows:

- PFOS = 1,260  $\mu$ g/kg;
- PFOA = 1,260  $\mu$ g/kg; and
- PFBS =  $1,260,000 \mu g/kg$ .

No surface water or sediment screening criteria have been established by EPA at this time.

As of the preparation of this SI Report, no site-specific soil, sediment, or groundwater screening levels have been developed in Oregon. However, Oregon has established initiation levels for PFOS, PFOA, PFNA, and PFHpA in surface water. The initiation levels for surface water are as follows:

- PFOS = 24,000 ng/L;
- PFOA = 300,000 ng/L;

- PFNA = 1,000 ng/L; and
- PFHpA = 300,000 ng/L.

The initiation levels for surface water are provided for guidance only.

The SI results will be compared against the screening criteria provided in Table 2. Sediment results will be compared with the soil screening criteria and the surface water results will be compared with the groundwater screening criteria provided in this table.

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# 2.0 INSTALLATION DESCRIPTION

#### 2.1 LOCATION

Kingsley Field ANGB is the home of the 173<sup>rd</sup> Fighter Wing (FW) in Klamath Falls, Klamath County, in southern Oregon. Kingsley Field ANGB is located on the western side of Crater Lake-Klamath Regional Airport, approximately 4 miles south of the city of Klamath Falls. The entire airport comprises approximately 1,200 acres, owned and operated by the city of Klamath Falls. The 173<sup>rd</sup> FW leases approximately 256 acres of Exclusive Use Area in the western portion of Kingsley Field. The Kingsley Field ANGB location is shown in Figure 1.

# 2.2 ORGANIZATION AND HISTORY

The airfield at Kingsley Field was established as Klamath Falls Municipal Airport (currently known as Crater Lake-Klamath Regional Airport) in 1928. In 1942, the U.S. Navy selected the Airport as a site for a naval air station, and construction of that station was completed in 1945. The airfield and building area consisted of 3,200-ft-wide runways of varying lengths, several buildings, and a variety of hangar facilities (NGB 2011).

After World War II, the air station was closed following less than 1 year of operation. A portion of the facility was returned to the city of Klamath Falls for use as a municipal airport, and the remainder was turned over to the U.S. Department of the Interior (DOI). In 1954, the DOI property was transferred to the U.S. Air Force (USAF) to establish an all-weather fighter interceptor complex. Part of the city-owned property was leased to the USAF to meet the requirements of the new mission. Existing buildings were rehabilitated, and new buildings were constructed beginning in 1955. The airport was dedicated as Kingsley Field in 1957 (NGB 2011).

In 1979, the USAF realignment removed active USAF units from Kingsley Field, and in 1981, the 142<sup>nd</sup> Fighter Interceptor Group of the Oregon ANG assumed alert detachment responsibility for air defense alert from USAF. In 1986, unit training assembly weekends began. The fighter training squadron was renamed the 173<sup>nd</sup> FW in 1996. Over the years, the unit has been assigned several different kinds of aircraft. The latest conversion to the F-15 aircraft occurred in 1998. As an F-15 Formal Training Unit, Air Education and Training Command, the mission of the 173<sup>nd</sup> FW is to train air-to-air combat pilots, train flight surgeons (Top Knife), and serve Oregon and the Nation in times of peace and war (NGB 2011).

DoD began investigations at military bases under the Installation Restoration Program with the goal of identifying, evaluating, and remediating areas of contamination (the program is now referred to as the Environmental Restoration Program). These investigations included PAs, site investigations, removal action investigations, and remedial investigations (RIs). Prior to the BB&E 2015 PA, potential releases of PFOS/PFOA from use and storage of AFFF had not been evaluated at Kingsley Field ANGB.

Base operations that could have contributed to PFOS/PFOA contamination of soil, groundwater, sediment, and surface water include fire training areas (FTAs) and non-FTAs. FTA PRLs are sites where AFFF was likely used for fire suppression during training activities. No FTAs are located on Kingsley Field ANGB property. Non-FTA PRLs identified at Kingsley Field ANGB are sites where AFFF was stored, released, and/or likely to have been released, and include the aircraft maintenance building/hangar (PRL 1), former vehicle maintenance building (PRL 5), fire station (PRL 6), Fire Equipment Testing Area (FETA) (PRLs 2, 3, and 4), and stormwater outfalls (PRLs 7 and 8) (BB&E 2015).

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When AFFF is released to the environment, PFOS/PFOA can migrate into soil and groundwater. The amount of PFOS/PFOA that migrates to groundwater depends on the type and amount of AFFF used, where it was used, the type of soil, and other factors. PFOS/PFOA may migrate readily from soil to groundwater. The primary exposure pathway for PFOS/PFOA is the ingestion of contaminated drinking water.

# 3.0 ENVIRONMENTAL SETTING

#### 3.1 CLIMATE

Kingsley Field ANGB is in Klamath County, Oregon, and is located in a semi-arid climate that experiences warm summers and cool winters with occasional periods of cold. The average annual temperature is 45.9°F, ranging from an average low of 20.8°F to an average high of 83.6°F. The mean annual precipitation at Klamath Falls is approximately 20.72 in., with about 70% of the total precipitation occurring from October through May. The average number of days with 0.1 in. or more of precipitation is 55.90. Klamath Falls gets significant snowfall, with an annual average of 65.33 in. of snow and an average of 65.18 days with 1 in. of snow or more (USA.com 2017).

#### 3.2 **TOPOGRAPHY**

Kingsley Field ANGB is generally flat, although regionally, the area slopes gently to the east. The local topography generally slopes to the north toward the Bird Creek drainage area. Tulsa International Airport is 667 ft above mean sea level (AMSL) with Kingsley Field ANGB averaging 610 ft AMSL. Kingsley Field ANGB is located at an elevation of approximately 4,089 ft AMSL.

#### 3.3 **GEOLOGY**

Klamath Falls is located on the dry lower Klamath Lake Bed in south-central Oregon, on a plain that slopes gently to the southeast. The geologic structure of the Klamath Falls area is dominated by a number of northwest/southeast-trending normal faults. Movement along these faults produces horst and graben features that are typical of Basin and Range geologic structure. The uplifted horst blocks commonly form the ridges typical in this area, while the down faulted graben features form the valleys. Kingsley Field is located in such a valley. Faulting that has occurred along the valley floors usually has no obvious surface expression. No faults are known to exist beneath Kingsley Field; however, the existence of a fault a short distance from the facility is suggested by the presence of shallow geothermal water (CH2M Hill 1981).

Klamath Falls is situated within an area that was covered by ancestral Lake Klamath during the Pleistocene Era. The facility is underlain by a thick sequence of Quaternary alluvial sediments. The actual thickness is unknown, but geothermal test wells near the Base have been drilled to depths greater than 1,500 ft below ground surface (BGS) without encountering bedrock (CH2M Hill 1981). The sediments underlying the facility are composed of sand, silt, and clay, primarily of lacustrine origin. The finergrained sediments were deposited in areas of the lake relatively far from the shoreline. The coarser sands were deposited near the shoreline or in beds of streams feeding the lake. This depositional system resulted in alternating layers of fine silty sand, sandy silt, silt, and clayey silt that are laterally discontinuous (ANG 2014). Borings and well installations conducted during the Leidos SI did not encounter bedrock (Appendix A).

#### 3.4 **SOIL**

The soils that underlie the Base are primarily of the Henley, Poe, Laki, Malin, and Hosley series. These are generally poorly drained soils developed on low terraces of floodplains/lake bottoms from alluvial or lacustrine sediments, some from volcanic materials such as ash or tuff. Some of these soils have an indurated hardpan layer beginning at depths of 2 to 3 ft BGS (Science and Technology, Inc. 1993). Native, near-surface soil has been observed to be poorly graded, fine to coarse sand with varying amounts of silt. Soils identified during the Leidos SI typically consisted of sand, silty sand, and gravel.

3-1

# 3.5 SURFACE WATER HYDROLOGY

No natural or significant surface water bodies, navigable waterways, or wetlands are present at Kingsley Field ANGB. Klamath River is the major surface body of water located to the northwest of Kingsley Field ANGB.

Surface water flow at Kingsley Field ANGB is dictated by the Base's man-made surface drainage system. Precipitation will predominantly infiltrate the sandy and permeable shallow surface soils. Precipitation on paved surfaces will generally be collected by the Base's storm drain system and discharge to the drainage ditches and canals located to the east and west of the Base (ANG 2014). These ditches flow to the North and South Outfalls.

The North Outfall (PRL 7) is located outside the northern Base boundary at the northern boundary of the Klamath Falls Airport. The North Outfall appears to drain northward to the Number One C Drain then west to the Klamath River. The South Outfall (PRL 8) is located outside of the Base boundary in the western-central portion of the Klamath Falls Airport. The South Outfall discharges the majority of the stormwater from Kingsley Field ANGB, including five PRLs. The South Outfall appears to drain to the Lost River Diversion Channel and then discharges to the Klamath River.

The Base is located approximately 3 miles west-northwest of Lost River and approximately 3 miles east-southeast of the Klamath River. The Lost River Diversion Canal, which is an irrigation canal, connects the two basins. A series of drainage ditches and culverts control surface runoff throughout Kingsley Field. The surface runoff is eventually diverted to the Lost River Diversion Canal (URS 2010).

#### 3.6 HYDROGEOLOGY

Regional groundwater movement in the Sedimentary Aquifer is generally southeasterly toward the Lost River and the Lost River Diversion Channel. The U.S. Geological Survey (USGS) reports that the regional groundwater flow gradient in the Kingsley Field area is toward the southeast (USGS 2007). In some areas, the Sedimentary Aquifer contains coarser sands of relatively high hydraulic conductivity that can yield moderate quantities of water. In the vicinity of Kingsley Field, only a small quantity of sand is present in the subsurface, and well yields are relatively low. An average specific capacity of 0.45 gal per minute (gpm) per foot of drawdown was indicated for wells completed into the Sedimentary Aquifer (Illian 1971). However, a 79-ft test well drilled in the vicinity yielded 200 gpm with a drawdown of only 25 ft (8 gpm per foot). This well and other nearby test borings indicate the presence of a permeable shallow aquifer in this area. The low yields of other nearby wells indicate that the sand encountered in these test wells is probably of limited areal extent and may be an ancient river channel (CH2M Hill 1981).

The groundwater information collected from the existing monitoring wells in the vicinity of PRL 5 and the five new monitoring wells installed in PRLs 1 through 4 and 6 during the Leidos SI field activities confirmed a southeasterly flow of shallow groundwater. The shallow water table occurs at varying depths within Kingsley ANGB. Soil boring logs indicate shallow groundwater was encountered at depths ranging from 5.5 ft BGS in KLA01-SB3 to 7.5 ft BGS in KLA01-SB2. Groundwater levels collected before purging and sampling monitoring wells installed during the SI indicate the depth to shallow groundwater ranged from 4.65 ft BGS in MW-572-02-PRL05 and MW-573-03-PRL05 to 8.24 ft BGS in MW-KLA06-01.

Groundwater in the vicinity of Kingsley Field is reported to be of moderate quality with high concentrations of methane or iron (CH2M Hill 1981). No drinking water wells are located on Kingsley ANGB, and water used at the Base is supplied by the city of Klamath Falls (ANG 2014). City water supplies are obtained from deep groundwater wells ranging in depth from 300 to more than 1,000 ft (City of Klamath Falls 2017).

#### 3.7 CRITICAL HABITATS AND ENDANGERED/THREATENED SPECIES

According to the U.S. Fish and Wildlife Service (USFWS) and a review of the list of federally listed threatened and endangered species, the following federally listed threatened, endangered, or proposed species are known to or are believed to occur in Klamath County, Oregon (USFWS 2017). The potential for these species to occur in Klamath County does not mean they are present at Kingsley Field ANGB:

# • Amphibians:

Oregon spotted frog (*Rana pretiosa*) – Threatened.

#### Birds:

- Yellow-billed cuckoo (*Coccyzus americanus*) Threatened, and
- o Northern spotted owl (*Strix occidentalis caurina*) Threatened.

# Conifers and cycads:

o Whitebark pine (*Pinus albicaulis*) – Candidate.

#### • Fishes:

- o Lost River sucker (*Deltistes luxatus*) Endangered,
- o Shortnose sucker (Chasmistes brevirostris) Endangered, and
- o Bull trout (Salvelinus confluentus) Threatened.

# • Flowering plants:

- o Hoover's spurge (Chamaesyce hooveri) Threatened,
- o Gentner's fritillary (Fritillaria gentneri) Endangered,
- o Slender orcutt grass (Orcuttia tenuis) Threatened,
- o Greene's tuctoria (*Tuctoria greenei*) Endangered, and
- o Applegate's milk-vetch (*Astragalus applegatei*) Endangered.

#### Mammals:

- o Gray wolf (Canis lupus) Endangered, and
- o Northern American wolverine (*Gulo gulo luscus*) Proposed Threatened.

Kingsley Field has the presence of Applegate's milk-vetch, and the stormwater outfalls lead to water containing the Lost River sucker.

Wetlands have not been formally delineated and mapped to date within the Kingsley Field ANGB Exclusive Use Area. According to USFWS National Wetlands Inventory Maps and the Klamath Falls Airport Wildlife Habitat Management Implementation Plan, however, several areas of wetlands totaling approximately 45 acres are located in the vicinity of Kingsley Field. Other sources, such as the Kingsley Field ANGB Master Plan, indicate as little as about 10 acres of wetlands on the facility (ANG Kingsley Field 2009). These areas fall under the jurisdiction of the U.S. Army Corps of Engineers or the Oregon Department of State Lands. None of the mapped wetland areas, however, are located on the developed sections of Kingsley Field ANGB (although they have seen significant disturbance). Approximately 23 acres of wetlands have been filled by implementing the airport's Wildlife Habitat Management Implementation Plan (Klamath Falls Airport 2005). However, the noted wetlands were not present in the vicinity of the PRLs included in this SI.

# 3.8 WATER WELLS

The PA Report (BB&E 2015) indicates there are no federal or public water wells within a 1-mile radius of the Base. A review of the EDR Radius Map<sup>TM</sup> Report with Geocheck<sup>®</sup> dated July 20, 2015 (EDR 2015) shows two water wells within a 1-mile radius of the Base. Based on the information provided for these two wells located southwest of the Base, they are either observational or test wells. According to Base personnel, no drinking water wells are located at the Base. Water is supplied from the city of Klamath Falls (ANG 2014). City water supplies are obtained from deep groundwater wells ranging in depth from 300 to more than 1,000 ft (City of Klamath Falls 2017).

# 4.0 PRELIMINARY ASSESSMENT

In September 2015, BB&E conducted a PA to identify potential sites of historical environmental releases of PFOS/PFOA related to AFFF usage and storage at Kingsley Field ANGB (BB&E 2015). The PA evaluated a total of eight PRLs and recommended six of these for further investigation under an SI (Table 2; see also Figure 1). At the time of the 2015 PA, no documentation was available showing that soil, groundwater, sediment, and surface water at Kingsley Field ANGB were previously tested for PFOS/PFOA; therefore, these compounds could be present in media at any of these PRLs. However, prior to this SI, ANG requested that all eight PRLs be further investigated (see Section 5.1.2).

BB&E researched the potential existence of any documented FTAs or any other use or release of AFFF. No evidence was found that a current or former FTA that utilized AFFF was located within the footprint of the Kingsley Field ANGB site boundary.

The PA site visit included onsite interviews with active and former personnel from the ANGB and other parties with relevant historical site knowledge. According to Base personnel, 3% AFFF was used at Kingsley Field ANGB from approximately 1987 to 2013, and the only exception is that AFFF is still stored and used at the fire station (PRL 6). One hangar (Hangar 333) was equipped with an AFFF fire suppression system (FSS); the FSS was converted to a high expansion foam (HEF) system.

The sections below briefly describe the operational history and waste characteristics of the PRLs included in this SI, as presented in the PA Report (BB&E 2015). PRL numbers correspond to the area of concern designation used in the PA Report, and all building descriptions, AFFF inventories, and release histories reflect conditions at the time of the 2015 BB&E site visit.

# 4.1 PRL 1: HANGAR 333 – FUEL CELL MAINTENANCE DOCK

Hangar 333's FSS with AFFF was installed in 1987. In 2007, approximately 200 gal of AFFF plus associated water were released at Hangar 333 (total volume unknown). As shown in Figure 1-1, PRL 1 has two distinct areas. Most of the AFFF and water mixture was contained inside the building where floor drains are connected to the sanitary sewer. The floor drains were reportedly plugged at the time of the release. This mixture of AFFF and water was removed by hand (e.g., temporary trash pumps) and discharged east of the hangar, across the taxiway, and into a grassy area adjacent to the taxiway. The FSS was converted from AFFF to HEF in 2012 to 2013.

#### 4.2 PRL 2: FETA – NORTH

From approximately 1995 to 2005, AFFF testing from three fire trucks would occur every Monday at one of three locations: the North FETA, the South FETA, or the Compass Rose FETA. Typically, the fire department (FD) utilized 3% AFFF. The estimated amount of AFFF released weekly was 3 to 4 gal per testing event; exact discharge quantities are unknown. The North FETA is a flat, grass- and dirt-covered area (an estimated 1- to 2-acre area) located southeast of the alert apron adjacent to the Pelican Aviation (Building 8) ramp. Fire trucks would typically pull up near the edge of the paved road area east of Pelican Aviation and conduct foam testing in a northerly direction, to the north of Pelican Aviation, south of Taxiway A, and west of the north-south access road located immediately east of Pelican Aviation (Building 8). AFFF released during testing would likely have infiltrated permeable surface soils in this area.

Because FETA – North was determined to be outside the Base boundary, it was not included in the SI WP. However, ANG requested soil and groundwater samples be collected from this PRL during the SI. The PRL 2 field investigation will be documented as a field change in the SI Report (Section 5.1.2).

#### 4.3 PRL 3: FETA – SOUTH

From approximately 1995 to 2005, AFFF testing from three fire trucks would occur every Monday at one of three locations: the North FETA, the South FETA, or the Compass Rose FETA. Typically, the FD utilized 3% AFFF. The estimated amount of AFFF released weekly was 3 to 4 gal per testing event; exact discharge quantities are unknown. The South FETA is a flat, grass- and dirt-covered area (an estimated approximately 1- to 2- acre area) located along the northern side of the far western end of Runway 725, west of Taxiway D. Fire trucks would typically pull up along the northern edge of Runway 725 at the far western end and conduct foam testing in a northerly direction. AFFF released during testing would likely have infiltrated permeable surface soils in this area.

The PA Report (BB&E 2015) identified the northern portion of this PRL to be within the Base boundary, and this PRL was included in the SI scope. More recent updates to the Base boundary show this PRL to be fully outside the Base boundary, and this information was confirmed during the Installation site visit. The SI focused on the northern portion of PRL 3 originally within the Base boundary.

#### 4.4 PRL 4: FETA – COMPASS ROSE

From approximately 1995 to 2005, AFFF testing from three fire trucks would occur every Monday at one of three locations: the North FETA, the South FETA, or the Compass Rose FETA. Typically, the FD utilized 3% AFFF. The estimated amount of AFFF released weekly was 3 to 4 gal per testing event; exact discharge quantities are unknown. The Compass Rose FETA is a flat, grass- and dirt-covered area located off the eastern edge of the Base's Compass Rose used for the calibration of aircraft directional control systems. Fire trucks would typically pull up near the eastern edge of the paved area surrounding the Compass Rose and discharge into the grassy area northeast, east, and southeast from the Compass Rose. Relative to the other FETAs, the Compass Rose FETA site was used much more frequently than the other two FETAs and would likely have the greatest amount of AFFF released to the ground surface. AFFF released during testing would likely have infiltrated permeable surface soils in this area.

#### 4.5 PRL 5: BUILDING 573 – FORMER VEHICLE MAINTENANCE BUILDING

Small discharges of AFFF mixture have occurred at this building after repairs were completed on fire trucks and as they were tested on an as-needed basis approximately one to two times per year. These small amounts of AFFF would have been discharged into the grassy area on the northern side of Building 573, north of the vehicle bays, and also possibly to the west and south over the fence depending on wind or weather conditions at the time.

# 4.6 PRL 6: BUILDING 216 – CURRENT AND FORMER FIRE STATION

This new fire station was built in 1995 after the old fire station was demolished. At the time of the August 2015 PA site visit, AFFF storage at the fire station included the following:

- 1,014 gal (Chemguard) of AFFF are currently in inventory, including trucks and storage. The maximum capacity of trucks and storage is approximately 1,300 gal.
- Up to 500 gal of AFFF are stored on the 2<sup>nd</sup> floor in two 250-gal poly storage tanks.
- Five 5-gal totes are utilized to fill the 2<sup>nd</sup> floor AFFF poly storage tanks.
- Six firefighting trucks with foam-holding tanks (approximately 800 gal AFFF).
- One support vehicle with a 25-gal AFFF capacity (typically five 5-gal totes).

Firefighting trucks currently pull up alongside the southern end of the fire station building where AFFF from the 2<sup>nd</sup> floor storage totes is gravity-fed into their holding tanks. This method of filling the trucks has

been ongoing for approximately 1 year. Prior to that, the trucks were manually filled with AFFF from 5-gal totes inside the fire station.

Interviews with FD personnel indicate one release of AFFF at Building 216 in 2000. Approximately 5 gal of AFFF entered the sanitary sewer system via the building's floor drains and then into the city's wastewater treatment plant, where foaming was observed and reported.

Monthly AFFF foam testing of one fire truck is performed in the grassy area north of Building 216, in the location of the former Building 216.

The former fire station (Former Building 216) was in operation from approximately the mid-1940s to 1995, when it was demolished. The site is now a vacant grassy area located immediately north of the current fire station building. Per FD personnel, since the beginning of 2015, monthly foam testing is conducted with one truck within the grassy area; discharge quantities are unknown but reported to be small amounts. No additional releases were reported in this area of the former fire station.

#### 4.7 PRLs 7 AND 8: NORTH AND SOUTH OUTFALLS

Although no records or Base personnel accounts of AFFF releases at the North and South Outfalls exist, documented use/storage of AFFF exists within the drainage basin (including PRLs 1, 3, 4, 5, and 6), which may have discharged to the South Outfall. During the Installation site visit, it was determined that none of the PRLs except FETA – North (located outside the Base boundary) would likely contribute surface water runoff to the North Outfall (PRL 7). The North Outfall is located at the northern end of the Klamath Falls Airport. The South Outfall is located in the west-central portion of the Klamath Falls Airport, south of the main portions of the Base boundary. These outfalls may have received any potential releases of AFFF that would have entered the drainage ditches and canals located to the east and west of the Base.

The North Outfall (PRL 7) was not included in the SI WP because the PRL is outside the Base boundary. However, ANG requested sediment and surface water samples (if available) be collected from this PRL during the SI. The field investigation at PRL 7 will be documented as a field change in the SI Report (Section 5.1.2).

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# 5.0 SITE INVESTIGATION FIELD PROGRAM

This section summarizes the SI field activities, including soil, groundwater, surface water, and sediment sampling, at Kingsley Field ANGB. Analytical results for each PRL are presented and identify the presence or absence of PFOS/PFOA and results for PFOS, PFOA, and PFBS that exceed the screening criteria shown in Table 2 and described in Section 1.2 of this SI Report.

SI field activities were conducted between April 30 and May 7, 2018. All sampling and analytical activities were conducted in accordance with the procedures specified in the SI WP (Leidos 2018), except as noted in Section 5.1.2. Boring logs and monitoring well construction logs are provided in Appendix A and groundwater sampling logs are provided in Appendix B. The groundwater monitoring well survey report is included in Appendix C. The data validation report is provided in Appendix D. The full data package is provided in Appendix E.

# 5.1 GENERAL APPROACH

#### 5.1.1 Field Sampling

SI field activities included the following:

- Surface and subsurface soil sampling;
- Water level measurements at two existing monitoring wells and five newly installed permanent monitoring wells to confirm local groundwater flow at Kingsley Field ANGB;
- Installation and sampling of groundwater from five new monitoring wells and two existing monitoring wells located downgradient from the PRLs and/or at the Installation boundary;
- Surface water and sediment sampling (if available); and
- Global positioning system survey of soil borings, sediment, and surface water locations (the horizontal location and elevation of all newly installed wells were surveyed by a professional licensed surveyor).

Sample locations were based on known historical or potential releases, and site conditions as observed during the PA. Table 3 summarizes the SI sampling activities at Kingsley Field ANGB. Figure 2 shows an overview of the Kingsley Field ANGB SI sample locations. Prior to intrusive activities, an underground utility locator marked and cleared all boring locations.

A total of 17 soil borings were advanced. Borings were advanced in grassy areas using direct push technology (DPT) drilling to first water or refusal, whichever was encountered first (maximum depth was 10 ft BGS). All soil borings were logged for soil lithology. Boring logs are included in Appendix A. Two grab soil samples were collected from each boring—one from within the 0- to 2-ft BGS interval and one from within the 2-ft interval immediately above the water table.

All soil samples were screened by a photoionization detector as a health and safety precaution due to the potential presence of volatile organic compounds (VOCs). Following collection of soil samples, boreholes not co-located with monitoring wells were abandoned by backfilling with hydrated bentonite chips up to approximately 4 to 6 in. from the surface and capped with surrounding soil.

In addition to the two existing wells on Kingsley Field ANGB, five permanent monitoring wells were installed and water levels measured to determine groundwater flow direction. The new wells were developed and seven monitoring wells sampled following ANG guidance, as prescribed in the SI WP (Leidos 2018).

One surface water sample was collected from a storm sewer manhole located within the Base boundary, near the Hangar 333 Release Area (PRL 1). This manhole discharges stormwater to the South Outfall (PRL 8) and is the last available surface water sample location within the Base boundary, as described in the SI WP (Leidos 2018). No sediment was present in the manhole associated with the South Outfall. A sediment sample was collected from a shallow ditch located outside ANG property, near the northern boundary of the Airport north of the North FETA (PRL 2), to evaluate surface water and sediment associated with the North Outfall (PRL 7) leaving the Base and Airport. No surface water was present in the ditch associated with the North Outfall.

Additional details on the field activities for each PRL are provided in Sections 5.3 through 5.10.

#### 5.1.2 Deviations from the Work Plan

The following minor deviations were observed during field activities:

- No sediment was observed in the accessible on-Base manhole for the South Outfall (PRL 8). Therefore, no sediment samples were collected at this PRL.
- Due to an oversight, the field reagent blank was not collected per the Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) (Leidos 2018); note, this field quality control (QC) blank is not required under the Quality Systems Manual (QSM) Version 5.1 (DoD 2017) and does not impact the validation qualifiers assigned to the sample data and NFA is required.
- A groundwater sample from an existing well (MW-10-11-PRL04) was not collected because the well could not be located during the SI. As a result, the proposed new well (MW-KLA04-01) was relocated closer to the PRL and a groundwater sample was collected for the evaluation of PRL 4.
- At the request of ANG, a few changes were made to the sampling plan after the SI WP was approved by the Oregon Department of Environmental Quality. The changes were as follows:
  - O PRL 2 was not included in the SI WP (Leidos 2018) because it is located off Base. However, to address ANG's request to collect samples from PRL 2, Leidos collected soil samples from three soil borings at PRL 2 (which included soil samples from a soil boring relocated from PRL 6 to PRL 2) and a groundwater sample from a monitoring well relocated from PRL 1 (MW-KLA01-02) to PRL 2 (MW-KLA02-01).
  - o The proposed well MW-KLA01-01 at PRL 1 was moved slightly to the southeast to serve the dual purpose of a downgradient well and boundary well.
  - o PRL 7 was not included in the SI WP (Leidos 2018) because it is located off Base. However to address ANG's request to collect samples from PRL 7, Leidos collected a sediment sample from a drainage ditch associated with the North Outfall (PRL 7). Surface water was not available at this PRL, and therefore, a surface water sample could not be collected.

# 5.1.3 Data Analysis

# 5.1.3.1 Laboratory

Environmental samples were submitted to TestAmerica Analytical Laboratories, Inc. (TestAmerica), in West Sacramento, California. TestAmerica is accredited under the DoD Environmental Laboratory Accreditation Program and maintains a National Environmental Laboratory Accreditation Program certification.

# 5.1.3.2 Screening criteria

Analytical data for three of the 2012 EPA UCMR3 COCs (PFOS, PFOA, PFBS) were compared to appropriate HA or risk-based screening criteria (Section 1.2 and Table 2) to determine whether further investigation is required. No HA or RSL criteria currently exist for PFHpA, PFHxS, or PFNA.

#### 5.1.3.3 Data validation

A UFP-QAPP was developed for this project as Appendix A of the SI WP (Leidos 2018). The UFP-QAPP was written to apply to all 15 Installations included in the scope of the Phase III SI contract. Specifics on the number and type of samples to be collected in characterizing the site, and the number and type of quality assurance (QA)/QC samples to be used to evaluate the quality of the data obtained, were included in the SI WP (Leidos 2018). Soil and sediment were collected in one 4-oz. high-density polyethylene (HDPE) container with an HDPE cap. Groundwater and surface water samples were collected in two 250-mL HDPE containers with HDPE caps. The following samples were collected during the Kingsley Field ANGB SI:

- Thirty-four soil samples,
- One sediment sample,
- Seven groundwater samples,
- One surface water sample,
- Five soil field duplicate samples,
- One sediment field duplicate,
- One groundwater field duplicate,
- Five equipment rinsates, and
- One field blank.

The results of the data quality evaluation of the investigative field sample data indicate that the overall quality of the data is acceptable to confirm the presence or absence of contamination. Through data verification, validation, and review, the analytical information has been qualified as appropriate. Data are considered usable if they are unqualified or qualified as estimated. For groundwater and surface water, 100% of the data were considered usable. For soil and sediment, 100% of the data were considered usable. The overall quality of the data meets or exceeds the established project objectives.

# Quality Control

Seven field duplicate samples were collected, including five for soil, one for sediment, and one for groundwater, and analyzed for PFOS/PFOA. Field duplicate analytical results were generally consistent with their associated parent samples, indicating no significant issues with field and laboratory precision. The groundwater duplicate pair and four soil pairs had relative percent difference (RPD) values below the UFP-QAPP guidelines of 50% for all detected analytes. Two analytes in one soil field duplicate pair had RPD values above the guideline (64% for PFNA and 68% for PFOA in KLA05-SB1-01/01D).

Two analytes in the sediment field duplicate pair had RPD values above guidelines (81% for PFHxS and 81% for PFOS in KLA07-SD1-01/01D), although all parent results were non-detections. Data are not qualified on the basis of field duplicate results alone since the *Contract Laboratory Program National Functional Guidelines for the Organic Data Review* (EPA 1999), and the DoD QSM Version 5.1 (DoD 2017) do not include control limits for field duplicate RPD values. Five equipment rinsate samples were collected, including four associated with soil samples and one associated with groundwater. In equipment blank samples ER-01, ER-02, ER-04, and ER-05, PFOS/PFOA was detected, although at low estimated concentrations that did not result in additional field sample qualifications. Field blank sample FB-01 was collected from deionized water and analyzed for PFOS/PFOA. In field blank FB-01, PFOS/PFOA was detected at a low estimated concentration that resulted in one sample qualified as non-detect (U). For these reasons, SI data quality was not impacted as a result of PFOS/PFOA detections in the field blanks.

#### PFOS/PFOA

Some PFOS/PFOA compounds were qualified as estimated due to minor QC outliers. Ten PFOS/PFOA results were qualified as estimated (J) due to surrogate recovery results outside control limits. Seventy PFOS/PFOA results were qualified as estimated (J/UJ) due to internal standard outliers. PFHpA and PFOA in KLA06-SB2-01 and PFOS in sample KLA02-SB1-01 were qualified as estimated (J) due to matrix spike/matrix spike duplicate (MS/MSD) recovery outliers. Five PFHxS results were qualified as non-detect due to continuing calibration blank contamination. Twelve PFOS/PFOA results were qualified as estimated due to results reported above the calibration range after maximum dilution. No other QC outliers resulted in qualification of the data during the data validation process.

Except as noted above, data produced for this investigation demonstrate that it can withstand scientific scrutiny; are appropriate for its intended purpose; are technically defensible; and are of known and acceptable sensitivity, precision, and accuracy. Data integrity has been documented through proper implementation of QA and QC measures. The environmental information presented has an established confidence that allows utilization for the project objectives and provides data for future needs.

#### 5.2 INVESTIGATION-DERIVED WASTE

Investigation-derived waste (IDW) was managed in compliance with the SI WP (Leidos 2018). Five drums of non-hazardous soil IDW and six drums of non-hazardous water IDW were transported to a designated drum staging area located onsite. Two IDW samples (one aqueous and one solid) were collected for this event, and the results in conjunction with the historical site process knowledge were used for characterization of generated IDW. The IDW has been characterized as non-hazardous waste and the IDW drums have been removed from the Base for offsite disposal at a permitted facility.

# 5.3 PRL 1: HANGAR 333 – FUEL CELL MAINTENANCE DOCK

A total of three soil borings and one monitoring well were installed and sampled at PRL 1 (Table 3), as described below.

# 5.3.1 Sampling Activities

# 5.3.1.1 Soil sampling

A total of three soil borings were installed on May 2, 2018, in the PRL 1 area. KLA01-SB1 was installed in a grassy area north of the concrete ramp on the eastern portion of Hangar 333 (Figure 3). KLA01-SB2 was installed in a grassy area east of the concrete ramp on the eastern portion of Hangar 333, near the taxiway (Figure 3). KLA01-SB3 was installed in a grassy area east of Hangar 333, across the taxiway where AFFF removed from the Building 333 spill was reportedly discharged (Figure 3). The soil borings were advanced using a DPT drill rig. Borings were advanced to total depth of 10 ft BGS. Soil lithology

descriptions were logged on the soil boring logs (Appendix A). A total of six soil samples were collected and analyzed for PFOS/PFOA compounds.

#### 5.3.1.2 Groundwater

MW-KLA01-01 was drilled in the grassy area southeast of the Hangar 333 Release Area, downgradient from the PRL, near the Installation boundary, and in the general groundwater flow direction on May 1, 2018 (Figure 8). Well construction details are shown in Table 4. The soil lithology descriptions and well construction diagram are included in Appendix A.

MW-KLA01-01 was developed on May 5, 2018, and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater sample MW-KLA01-01-01 was collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

Well MW-KLA01-01 was surveyed by a licensed surveyor, and the well survey report is included in Appendix C.

# 5.3.2 Analytical Results

#### 5.3.2.1 Soil

Six soil samples were collected and analyzed from PRL 1, as described in Section 5.3.1. All surface soil samples showed detections above the laboratory detection limit for PFOS, PFOA, PFBS, and PFHxS, except PFHxS was not detected in KLA01-SB3-01. PFNA was not detected in all three samples, and PFHpA was detected in KLA01-SB1-01 but not detected in KLA01-SB2-01 and KLA01-SB3-01. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria.

In the subsurface soil samples KLA01-SB1-02 and KLA01-SB2-02, PFOS, PFOA, PFBS, PFHpA, PFHxS were detected above the laboratory detection limit, and PFNA was not detected. PFOS and PFHxS were only detected in sample KLA01-SB3-02. All other PFOS/PFOA results were non-detect in KLA01-SB3-02. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria. Soil analytical results for PRL 1 are presented in Table 7 and shown in Figure 3.

# 5.3.2.2 Groundwater

One groundwater sample was collected from MW-KLA01-01 and analyzed as described in Section 5.3.1. All six PFOS/PFOA compounds were detected above laboratory detection limits, and PFOS exceeded the 70-ng/L EPA drinking water HA (EPA 2016a) at a concentration of 500 J ng/L. The combined PFOS/PFOA concentration at this location is 520 ng/L, exceeding the EPA HA. PFOA was below the EPA HA and PFBS was below the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. Groundwater analytical results for PRL 1 are presented in Table 8 and shown in Figure 8.

#### 5.4 PRL 2: FETA – NORTH

A total of three soil borings and one monitoring well were installed and sampled at PRL 2 (Table 3), as described below.

# 5.4.1 Sampling Activities

#### 5.4.1.1 Soil

A total of three soil borings were advanced on May 4, 2018, in the PRL 2 area. KLA02-SB1 was advanced in a grassy area in the northwestern portion of the PRL (Figure 4). KLA02-SB2 was advanced in a grassy area in the eastern portion of the PRL (Figure 4). KLA02-SB3 was advanced in a grassy area in the southwestern portion of the PRL (Figure 4). The soil borings were advanced using a DPT drill rig. Borings were advanced to total depths ranging from 7.5 ft BGS (KLA02-SB2) to 10 ft BGS (KLA02-SB3). Soil lithology descriptions were logged on the soil boring logs (Appendix A). A total of eight soil samples (including two field duplicates) were collected and analyzed for PFOS/PFOA compounds.

## 5.4.1.2 Groundwater

MW-KLA02-01 was drilled in the grassy area southeast and downgradient from the PRL, and in the general groundwater flow direction, on May 4, 2018 (Figure 8). Well construction details are shown in Table 4. The soil lithology descriptions and well construction diagram are included in Appendix A.

MW-KLA02-01 was developed on May 5, 2018, and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater sample MW-KLA02-01-01 was collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

Well MW-KLA02-01 was surveyed by a licensed surveyor, and the well survey report is included in Appendix C.

#### 5.4.2 Analytical Results

#### 5.4.2.1 Soil

Eight soil samples from KLA02-SB1, KLA02-SB2, and KLA02-SB3 were collected and analyzed as described in Section 5.4.1. All six PFOS/PFOA compounds were detected above laboratory detection limits in the surface soil samples with the exception of PFNA in KLA02-SB1-01. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria.

In the subsurface soil samples, all six PFOS/PFOA compounds were detected above laboratory detection limits with the exception of PFNA in KLA02-SB1-01. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria. PRL 2 soil analytical results are presented in Table 7 and shown in Figure 4.

## 5.4.2.2 Groundwater

One groundwater sample was collected from MW-KLA02-01 and analyzed as described in Section 5.4.1. All six PFOS/PFOA compounds were detected above laboratory detection limits, and PFOS and PFOA exceeded the 70-ng/L EPA drinking water HA (EPA 2016a and 2016b) at elevated concentrations of 380,000 J and 21,000 J ng/L, respectively. The combined PFOS/PFOA concentration at this location is 401,000 ng/L, significantly exceeding the EPA HA. PFBS was below the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. Groundwater analytical results for PRL 2 are presented in Table 8 and shown in Figure 8.

#### 5.5 PRL 3: FETA – SOUTH

A total of three soil borings and one monitoring well were installed and sampled at PRL 3 (Table 3), as described below.

## 5.5.1 Sampling Activities

#### 5.5.1.1 Soil

A total of three soil borings were installed on May 2, 2018, in the PRL 3 area. KLA03-SB1 and KLA03-SB3 were advanced in a grassy area in the northwestern portion of the PRL, within the Base boundary (Figure 3). KLA03-SB2 was installed in a grassy area in the northeastern portion of the PRL, within the Base boundary (Figure 3). The soil borings were advanced using a DPT drill rig. Borings were advanced to a total depth of 10 ft BGS. Soil lithology descriptions were logged on the soil boring logs (Appendix A). A total of seven soil samples (including one field duplicate) were collected and analyzed for PFOS/PFOA compounds.

#### 5.5.1.2 Groundwater

MW-KLA03-01 was drilled in the grassy area in the northeastern portion of the PRL (within the Base boundary) and in the general groundwater flow direction on May 2, 2018 (Figure 8). Well construction details are shown in Table 4. The soil lithology descriptions and well construction diagram are included in Appendix A.

MW-KLA03-01 was developed on May 5, 2018, and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater sample MW-KLA03-01-01 was collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

Well MW-KLA03-01 was surveyed by a licensed surveyor, and the well survey report is included in Appendix C.

## 5.5.2 Analytical Results

#### 5.5.2.1 Soil

Seven soil samples from KLA03-SB1, KLA03-SB2, and KLA03-SB3 were collected and analyzed as described in Section 5.5.1. PFOS, PFHxS, and PFBS were detected above laboratory detection limits in surface soil samples KLA03-SB1-01, KLA03-SB2-01, and KLA03-SB3-01. PFOA was detected in KLA03-SB2-01 and KLA03-SB3-01, and PFHpA was only detected in KLA03-SB3-01. PFNA was not detected in all three samples. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria.

In the subsurface soil samples, PFOS, PFOA, PFBS, and PFHxS were detected in KLA03-SB1-01 KLA03-SB2-01, and KLA03-SB3-01. PFHpA was only detected in KLA03-SB3-01. PFNA was not detected in all three samples. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria. PRL 3 soil analytical results are presented in Table 7 and shown in Figure 3.

#### 5.5.2.2 Groundwater

One groundwater sample was collected from MW-KLA03-01 and analyzed as described in Section 5.5.1. All six PFOS/PFOA compounds were detected above laboratory detection limits, and PFOS and PFOA exceeded the 70-ng/L EPA drinking water HA (EPA 2016a and 2016b) at concentrations of 6,100 and 290 ng/L. The combined PFOS/PFOA concentration at this location is 6,390 ng/L, exceeding the EPA HA. PFBS was detected below the EPA RSL. No screening criteria exist for PFNA, PFHxS, and PFHpA. Groundwater analytical results for PRL 3 are presented in Table 8 and shown in Figure 8.

#### 5.6 PRL 4: FETA – COMPASS ROSE

A total of three soil borings and one monitoring well were installed and sampled at PRL 4 (Table 3), as described below.

# 5.6.1 Sampling Activities

#### 5.6.1.1 Soil

A total of three soil borings were installed on May 5, 2018, in the PRL 4 area. KLA04-SB1 was installed in a grassy area immediately north of the Compass Rose (Figure 5). KLA04-SB2 was installed in a grassy area immediately east of the Compass Rose (Figure 5). KLA04-SB3 was installed in a grassy area immediately southeast of the Compass Rose (Figure 5). The soil borings were advanced using a DPT drill rig. Borings were advanced to total depth of 10 ft BGS. Soil lithology descriptions were logged on the soil boring logs (Appendix A). A total of six soil samples were collected and analyzed for PFOS/PFOA compounds.

## 5.6.1.2 Groundwater

The existing well (MW-10-11-PRL04) was not located during the SI, and no groundwater sample was collected. Therefore, the new well (MW-KLA04-01) was relocated west and closer to the PRL. MW-KLA04-01 was drilled in the grassy area southeast and downgradient from the PRL, and in the general groundwater flow direction, on May 3, 2018 (Figure 8). Well construction details are shown in Table 4. The soil lithology descriptions and well construction diagram are included in Appendix A.

MW-KLA04-01 was developed on May 5, 2018, and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater sample MW-KLA04-01-01 was collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

Well MW-KLA04-01 was surveyed by a licensed surveyor, and the well survey report is included in Appendix C.

#### 5.6.2 Analytical Results

## 5.6.2.1 Soil

Six soil samples from KLA04-SB1, KLA04-SB2, and KLA04-SB3 were collected and analyzed as described in Section 5.6.1. All six PFOS/PFOA compounds were detected above laboratory detection limits in surface soil samples KLA04-SB1-01, KLA04-SB2-01, and KLA04-SB3-01. The PFOS concentrations in surface soil samples KLA04-SB1, KLA04-SB2, and KLA04-SB3 were 2,200 J, 6,600 J, and 4,500 J µg/kg, respectively, and exceeded the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOA or PFBS exceeded the soil screening criteria.

In the subsurface soil samples, all six PFOS/PFOA compounds were detected above laboratory detection limits. The PFOS concentrations in subsurface soil samples KLA04-SB1, KLA04-SB2, and KLA04-SB3 were 3,600 J, 4,800 J, and 3,800 J  $\mu$ g/kg, respectively, and exceeded the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOA or PFBS exceeded the soil screening criteria. PRL 4 soil analytical results are presented in Table 7 and shown in Figure 5.

#### 5.6.2.2 Groundwater

One groundwater sample was collected from MW-KLA04-01 and analyzed as described in Section 5.6.1. Five of the six PFOS/PFOA compounds, with the exception of PFNA, were detected above laboratory detection limits, and PFOS exceeded the 70-ng/L EPA drinking water HA (EPA 2016a) at a concentration of 100 ng/L. The combined PFOS/PFOA concentration at this location is 141 ng/L, exceeding the EPA HA. PFOS was below the EPA HA and PFBS was below the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. Groundwater analytical results for PRL 4 are presented in Table 8 and shown in Figure 8.

#### 5.7 PRL 5: BUILDING 573 – FORMER VEHICLE MAINTENANCE BUILDING

A total of three soil borings were installed and sampled, and two existing monitoring wells were sampled at PRL 5 (Table 3), as described below.

# 5.7.1 Sampling Activities

#### 5.7.1.1 Soil

A total of three soil borings were installed on May 5, 2018, in the PRL 5 area. KLA05-SB1 was installed in a grassy area north of Building 573 (Figure 6). KLA05-SB2 was installed in a grassy area west of Building 573 (Figure 6). KLA05-SB3 was installed in a grassy area south of Building 573 (Figure 6). The soil borings were advanced using a DPT drill rig. Borings were advanced to total depths ranging from 7.5 ft BGS (KLA05-SB1, KLA05-SB2) to 8 ft BGS (KLA05-SB3). Soil lithology descriptions were logged on the soil boring logs (Appendix A). A total of seven soil samples (including one field duplicate) were collected and analyzed for PFOS/PFOA compounds.

## 5.7.1.2 Groundwater

Groundwater samples were collected from two existing wells (MW-572-02-PRL05, MW-573-03-PRL05). MW-572-02-PRL05 is located in the southeastern portion of the parking lot, near the Base boundary, and in the general direction of groundwater flow. MW-573-03-PRL05 is located just south of Building 573 and in the general direction of groundwater flow.

MW-572-02-PRL05 and MW-573-03-PRL05 were purged and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater samples MW-572-02-PRL05-01 (and one field duplicate) and MW-573-03-PRL05-01 were collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

# 5.7.2 Analytical Results

#### 5.7.2.1 Soil

Seven soil samples from KLA05-SB1, KLA05-SB2, and KLA05-SB3 were collected and analyzed as described in Section 5.7.1. All six PFOS/PFOA compounds were detected above laboratory detection

limits in surface soil samples KLA05-SB1-01, KLA05-SB2-01, and KLA05-SB3-01. The PFOS concentration in surface soil sample KLA05-SB3-01 was 14,000 J µg/kg and exceeded the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOA or PFBS exceeded the soil screening criteria.

In the subsurface soil samples, all six PFOS/PFOA compounds were detected in KLA05-SB2-02 and KLA05-SB3-02. PFOS, PFOA, PFHxS, and PFBS were detected in KLA05-SB1-02; PFNA and PFHpA were not detected. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria. PRL 5 soil analytical results are presented in Table 7 and shown in Figure 6.

#### 5.7.2.2 Groundwater

A total of three groundwater samples were collected – one from each of the wells (MW-572-02-PRL05, MW-573-03-PRL05) and a field duplicate. The groundwater samples were analyzed as described in Section 5.7.1. All six PFOS/PFOA compounds were detected above laboratory detection limits in both wells. PFOS and PFOA exceeded the 70-ng/L EPA drinking water HA (EPA 2016a and EPA 2016b) in well MW-573-03-PRL05. The PFOS concentration in MW-572-02-PRL05 (primary and duplicate samples) exceeded the EPA HA. The combined PFOS/PFOA concentrations at MW-572-02-PRL05 and MW-573-03-PRL05 are 1,156 ng/L (1,257 ng/L duplicate) and 69,700 ng/L, respectively. PFBS concentrations were below the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. Groundwater analytical results for PRL 5 are presented in Table 8 and shown in Figure 8.

#### 5.8 PRL 6: BUILDING 216 – CURRENT AND FORMER FIRE STATION

A total of two soil borings and one monitoring well were installed and sampled at PRL 6 (Table 3), as described below.

# 5.8.1 Sampling Activities

#### 5.8.1.1 Soil

A total of two soil borings were installed on May 1, 2018, in the PRL 6 area. KLA06-SB1 and KLA06-SB2 were installed in a grassy area north of Building 216 where spray testing occurred (Figure 7). The soil borings were advanced using a DPT drill rig. Borings were advanced to total depth 10 ft BGS. Soil lithology descriptions were logged on the soil boring logs (Appendix A). A total of five soil samples (including one field duplicate) were collected and analyzed for PFOS/PFOA compounds.

## 5.8.1.2 Groundwater

MW-KLA06-01 was drilled in the grassy area north of Building 216 where spray testing occurred, east of the two soil borings on May 1, 2018 (Figure 6). Well construction details are shown in Table 4. The soil lithology descriptions and well construction diagram are included in Appendix A.

MW-KLA06-01 was developed on May 5, 2018, and sampled on May 6, 2018. Water levels are shown in Table 5, and water quality parameters are shown in Table 6. Groundwater sample MW-KLA06-01-01 was collected and analyzed for PFOS/PFOA compounds. The Groundwater Micro Purge Sheet and Groundwater Micro Purge Log are included in Appendix B.

Well MW-KLA06-01 was surveyed by a licensed surveyor, and the well survey report is included in Appendix C.

# 5.8.2 Analytical Results

#### 5.8.2.1 Soil

Five soil samples from KLA06-SB1 and KLA06-SB2 were collected and analyzed as described in Section 5.8.1. All six PFOS/PFOA compounds were detected above laboratory detection limits in surface soil samples KLA06-SB1-01 and KLA06-SB2-01. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS, PFOA, or PFBS exceeded the soil screening criteria.

In the subsurface soil samples KLA06-SB1 and KLA06-SB2, all six PFOS/PFOA compounds were detected above the laboratory detection limits. The PFOS concentration in surface soil sample KLA06-SB2 was 1,600 J  $\mu$ g/kg and exceeded the EPA RSL. No screening criteria exist for PFNA, PFHxS, and PFHpA. None of the concentrations of PFOA or PFBS exceeded the soil screening criteria. PRL 6 soil analytical results are presented in Table 7 and shown in Figure 7.

#### 5.8.2.2 Groundwater

One groundwater sample was collected from MW-KLA06-01 and analyzed as described in Section 5.8.1. All six PFOS/PFOA compounds were detected above laboratory detection limits in both wells. PFOS and PFOA exceeded the 70-ng/L EPA drinking water HA (EPA 2016a and 2016b) at elevated concentrations of 130,000 J and 14,000 ng/L in MW-KLA06-01. The combined PFOS/PFOA concentration at this location is 144,000 ng/L, significantly exceeding the 70-ng/L EPA drinking water HA (EPA 2016a and 2016b). PFBS was below the EPA RSL. No screening criteria exist for PFHxS, PFHpA, and PFNA. Groundwater analytical results for PRL 6 are presented in Table 8 and shown in Figure 8.

#### 5.9 PRL 7: NORTH OUTFALL

The North Outfall is located at the northern boundary of the Klamath Falls Airport and likely discharges stormwater from PRL 2. The outfall also receives stormwater from other facilities at the northern portion of the Klamath Falls Airport. A sediment sample was collected from a drainage ditch prior to the North Outfall.

# 5.9.1 Sampling Activities

#### **5.9.1.1** Sediment

Sediment sample KLA07-SD1-01 was collected from a dry drainage ditch near the North Outfall on May 6, 2018, in the location shown in Figure 4. The sample was analyzed for PFOS/PFOA compounds.

### 5.9.1.2 Surface water

The collection of a surface water sample was attempted in the same location where the sediment sample was collected (Figure 6); however, no water was present in the ditch.

# 5.9.2 Analytical Results

## **5.9.2.1** Sediment

Sediment sample KLA07-SD1-01 was collected and analyzed as described in Section 5.9.1. PFOS/PFOA compounds were not detected at concentrations exceeding the laboratory detection limit in the primary sample. However, five of the six PFOS/PFOA compounds with the exception of PFNA were detected at low concentrations in the duplicate sample. The detected concentrations of PFOS, PFOA, and PFBS were

below the screening criteria. No screening criteria exist for PFHxS, PFHpA, and PFNA. PRL 8 sediment analytical results are presented in Table 8 and shown in Figure 4.

## 5.10 PRL PRL 8: SOUTH OUTFALL

The South Outfall is located in the western-central portion of the Klamath Falls Airport, south of the main portions of the Base boundary, and discharges the majority of the stormwater from Kingsley Field ANGB, including PRLs 1, 3, 4, 5, and 6. The South Outfall is representative of the overall impacts of PFOS/PFOA from the PRLs included in this SI. The outfall also receives stormwater from the Klamath Falls Airport. The last precipitation event was 0.01 in. on April 30, 2018. Surface water sample was collected inside of a storm sewer manhole located within the Installation boundary.

# 5.10.1 Sampling Activities

## 5.10.1.1 Surface water

A surface water sample KLA08-SW1-01 was collected on May 7, 2018, in the location shown in Figure 3. Water quality parameters were measured as shown in Table 6. The samples were analyzed for PFOS/PFOA compounds. The Sample Collection Log is included in Appendix B.

#### **5.10.1.2** Sediment

The collection of a sediment sample was attempted in the same location where the surface water sample was collected (Figure 3); however, no sediment was present in the manhole.

## 5.10.2 Analytical Results

### 5.10.2.1 Surface water

Surface water sample KLA08-SW1-01 was collected and analyzed as described in Section 5.10.1. Five of the six PFOS/PFOA compounds were detected at concentrations exceeding the laboratory detection limit with the exception of PFBS in KLA08-SW1-01. No screening criteria exist for PFHxS, PFHpA, and PFNA. None of the concentrations of PFOS or PFOA exceeded the drinking water screening criteria. PRL 8 surface water analytical results are presented in Table 8 and shown in Figure 3.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 CONCLUSIONS

This section presents the SI conclusions and recommendations for each PRL. The recommended DQOs are based on data collected by Leidos during this SI and an evaluation of the analytical results compared to applicable screening criteria.

## 6.1.1 PRL 1: Hangar 333 – Fuel Cell Maintenance Dock

Although PFOS/PFOA compounds were detected in PRL 1 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and no calculated residential risk-based screening level exceedances for PFOS or PFOA for soil in PRL 1.

Evaluation of groundwater data compared to screening criteria indicates an exceedance of the EPA HA (70 ng/L) in MW-KLA01-01 for PFOS and PFOA (combined), with a result of 520 ng/L.

Based on the SI results, the following DQOs are recommended for PRL 1:

- Additional surface and subsurface soil samples to determine if a previously undetected source area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional new monitoring wells located both upgradient of and downgradient from PRL 1.

#### 6.1.2 PRL 2: FETA – North

Although PFOS/PFOA compounds were detected in PRL 2 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and no calculated residential risk-based screening level exceedances for PFOS or PFOA for soil in PRL 2.

Evaluation of groundwater data compared to screening criteria indicate exceedances of the EPA HA (70 ng/L) in MW-KLA02-01 for PFOS, PFOA, and PFOS and PFOA (combined), with results of 380,000, 21,000, and 401,000 ng/L. MW-KLA02-01 had the highest reported concentration of PFOS and PFOA in groundwater or surface water for this SI.

Based on the SI results, the following DQOs are recommended for PRL 2:

- Additional surface and subsurface soil samples to determine if a previously undetected source area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional new monitoring wells located both upgradient of and downgradient from PRL 2 (which is located off Base).

#### **6.1.3 PRL 3: FETA – South**

Although PFOS/PFOA compounds were detected in PRL 3 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and no calculated residential risk-based screening level exceedances for PFOS or PFOA for soil in PRL 3.

Evaluation of groundwater data compared to screening criteria indicates an exceedance of the EPA HA (70 ng/L) in MW-KLA03-01 for PFOS and PFOA (combined), with a result of 6,390 ng/L.

Based on the SI results, the following DQOs are recommended for PRL 3:

- Additional surface and subsurface soil samples to determine if a previously undetected source area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional new monitoring wells located both upgradient of and downgradient from PRL 3.

# 6.1.4 PRL 4: FETA – Compass Rose

Although PFOS/PFOA compounds were detected in PRL 4 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and no calculated residential risk-based screening level exceedances for PFOA. However, PFOS concentrations in both surface and subsurface soil exceeded the screening criteria at every soil boring in PRL 4. The PFOS concentrations in surface soil samples ranged from 2,200 J to 6,600 J μg/kg and exceeded the screening level (1,260 μg/kg). The PFOS concentrations in subsurface soil samples ranged from 3,600 J to 4,800 J μg/kg and exceeded the screening level (1,260 μg/kg).

Groundwater results for the downgradient well MW-KLA04-01 indicated all PFOS/PFOA compounds were detected, except PFNA. The results also indicated EPA HA exceedances for PFOS, with a result of 100 ng/L, and PFOS and PFOA (combined) (141 ng/L), and no EPA RSL exceedances for PFBS.

Based on the SI results, the following DQOs are recommended for PRL 4:

- Additional surface and subsurface soil samples to determine the extent of the elevated PFOS
  concentrations observed in all three soil borings and to determine if a previously undetected source
  area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional monitoring wells located both upgradient of and downgradient from PRL 4.

## 6.1.5 PRL 5: Building 573 – Former Vehicle Maintenance Building

Although PFOS/PFOA compounds were detected in PRL 5 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and calculated residential risk-based screening level exceedances for PFOA, and only one screening level exceedance for PFOS for soil in PRL 5. The PFOS concentration in surface soil sample KLA05-SB3 was 14,000 J  $\mu$ g/kg and exceeded the screening level (1,260  $\mu$ g/kg). KLA05-SB3 was the highest reported concentration of PFOS in soil for this SI.

Evaluation of groundwater data compared to screening criteria indicates exceedances of the EPA HA (70 ng/L) in MW-572-02-PRL05 and MW-573-03-PRL05 for PFOS and PFOA (combined), with a result of 69,700 and 1,156 ng/L, respectively.

Based on the SI results, the following DQOs are recommended for PRL 5:

- Additional surface and subsurface soil samples to determine the extent of the elevated PFOS concentration observed in KLA05-SB3 and to determine if a previously undetected source area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional new monitoring wells located both upgradient of and downgradient from PRL 5.

## 6.1.6 PRL 6: Building 216 – Current and Former Fire Station

Although PFOS/PFOA compounds were detected in PRL 6 soil samples, evaluation of soil analytical data compared to soil screening criteria indicates there are no EPA RSL exceedances for PFBS and no calculated residential risk-based screening level exceedance PFOA, and only one screening level exceedance for PFOS for soil in PRL 6. The PFOS concentration in subsurface soil sample KLA06-SB2 was 1,600 J μg/kg and exceeded the screening level (1,260 μg/kg).

Evaluation of groundwater data compared to screening criteria indicates an exceedance of the EPA HA (70 ng/L) in MW-KLA06-01 for PFOS and PFOA (combined), with a result of 144,000 ng/L. There was no EPA RSL exceedance for PFBS.

Based on the SI results, the following DQOs are recommended for PRL 6:

- Additional surface and subsurface soil samples to determine the extent of the elevated PFOS concentration observed in KLA06-SB2 and to determine if a previously undetected source area exists that is contributing to the groundwater exceedances; and
- Additional investigation to determine the nature and extent of PFOS/PFOA in groundwater (both laterally and vertically), through sampling of additional new monitoring wells located both upgradient of and downgradient from PRL 6.

#### 6.1.7 PRL 7: North Outfall

PFOS/PFOA compounds were not detected at concentrations above the laboratory detection limit in the primary sediment sample from KLA07-SD1. However, low concentrations above the laboratory detection limit was detected for five of the six PFOS/PFOA compounds in the duplicate sediment sample from this location. No surface water was available in the ditch prior to the North Outfall; therefore, no surface water sample was collected.

The PA indicated that PRL 2 appeared to discharge to the North Outfall. Given the elevated PFOS concentration (401,000 ng/L) in groundwater at PRL 2 and low concentrations of PFOS/PFOA compounds detected in the sediment in the ditch associated with PRL 7, further investigation of the North Outfall is warranted.

Based on the SI results (including PRL 2), the following DQO is recommended for PRL 7:

• Additional investigation to further evaluate the concentrations of PFOS/PFOA in surface water and sediment.

#### 6.1.8 PRL 8: South Outfall

PFOS/PFOA compounds were not detected at concentrations above the laboratory detection limit in the primary surface water sample from KLA08-SW1. However low concentrations above the laboratory detection limit were detected for five of the six PFOS/PFOA compounds in the duplicate surface water sample from this location. No sediment was available in the storm sewer manhole within the Base boundary (north of the South Outfall, near PRLs 1 and 3); therefore, no sediment samples were collected.

The PA indicated that the South Outfall receives stormwater from PRLs 1, 3, 4, 5, and 6. Given the PFOS/PFOA exceedances in groundwater at all five PRLs and soil exceedances in three of the five PRLs, and the low concentrations of PFOS/PFOA detected in the surface water sample from KLA08-SW1, further investigation is warranted at PRL 8.

Based on the SI results, the following DQO is recommended for PRL 8:

 Additional investigation to further evaluate the concentrations of PFOS/PFOA in surface water and sediment.

## 6.1.9 PFOS/PFOA Contamination near Installation Boundary

Samples from five monitoring wells (MW-KLA01-01, MW-KLA03-01, MW-KLA04-01, MW-KLA06-01, and MW-572-02-PRL05) were used to evaluate the PFOS/PFOA contamination near the Installation boundary. All six PFOS/PFOA compounds were detected in the samples collected from these well locations. The screening results indicate the consistent presence of PFOS and PFOA at concentrations exceeding the 70-ng/L EPA drinking water HA (EPA 2016a and 2016b). Elevated PFOS and PFOA concentrations were observed in the water samples from locations near the northern and southern Installation boundaries (MW-KLA06-01 and MW-KLA03-01, respectively). PFBS concentrations did not exceed the RSL at any of the groundwater sample locations. No screening criteria exist for PFHxS, PFHpA, or PFNA. PFOS/PFOA compounds are likely migrating offsite (Airport property) given their presence and magnitude near the Installation boundary and the groundwater exceedances observed at PRL 2 located north of the Installation boundary.

### 6.2 SUMMARY AND RECOMMENDATIONS

In summary, additional investigations are recommended for soil and groundwater at PRLs 1, 2, 3, 4, 5, and 6, and surface water/sediment at PRLs 7 and 8. The recommendations are summarized in Table 9 and described briefly below:

- Further investigation at all PRLs is necessary to determine the nature and extent of PFOS/PFOA contamination due to detectable levels at the PRLs.
- Develop an expanded conceptual site model that considers localized groundwater and surface water flow paths to select future sampling locations.
- Complete the delineation of nature and extent of PFAS as part of an Expanded SI or an RI that could consist of:
  - O Additional soil and sediment sampling and analysis of an expanded list of PFAS constituents (in addition to the six UCMR3 constituents) to determine if significant source areas related to precursor substances are present. Precursor substances have been demonstrated to oxidize into PFOS and PFOA, and thus could provide a lingering source of these compounds to soil and groundwater.

- O An expanded groundwater sampling program (including analysis of an expanded list of PFAS constituents) to complete horizontal and vertical delineation of the PFOS/PFOA impacts. Further groundwater investigation at the Base boundary is recommended due to the presence of PFAS in groundwater above their respective screening criteria.
- The installation and sampling of upgradient and downgradient off-Base monitoring wells to better define the upgradient source of PFOS/PFOA as well as impacts of PFOS/PFOA that have migrated off Base.
- o The sampling of upgradient and downgradient off-Base surface water and sediment (including analysis of an expanded list of PFAS constituents) to determine if there is an upgradient source of PFOS/PFOA and better define the nature and extent of PFOS/PFOA in surface water that have migrated off Base.
- Conduct preliminary site-specific risk assessment calculations in order to identify chemicals of
  potential concern (COPCs) in every medium and establish preliminary remedial goals for screening
  purposes.

DQOs are proposed based on the results of the SI and are presented in Table 9. In general, additional samples are required at each PRL in order to establish the nature and extent of PFOA/PFOS constituents for each applicable medium and determine if a complete receptor pathway exists. For soil, additional samples are proposed to delineate the nature and extent and to determine if a source area exists, and if so, the vertical and horizontal extent for both the vadose and saturated zones. Additional surface water and sediment samples should be collected at PRLs 7 and 8.

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**TABLES** 

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Table 1. Preliminary Assessment Report Summary and Recommendations

No.	Potential AFFF PRL	Rationale	Recommendation
1	Hangar 333	One documented significant AFFF	Proceed to SI; focus on soil
		discharge to grassy area east of the hangar	and groundwater immediately
		in 2007.	east of taxiway located east of
			Hangar 333.
2	FETA – North	Historical testing of FD equipment.	Proceed to SI, focus on soil
			and groundwater.
3	FETA – South	Historical testing of FD equipment.	Proceed to SI, focus on soil
			and groundwater.
4	FETA – Compass Rose	Historical testing of FD equipment. The	Proceed to SI, focus on soil
		most heavily used area on the Base.	and groundwater.
5	Building 573	Minor amounts of AFFF potentially	Proceed to SI, focus on soil
		discharged to grassy areas outside fence to	and groundwater.
		the north, west, and south of Building 573.	
		Likely small amounts of AFFF utilized	
		during post-repair mini tests.	
6	Current and Former Fire	Minor amounts of AFFF likely discharged	Proceed to SI, focus on soil
	Station – Building 216	to grassy surface during more recent foam	and groundwater.
		testing in 2015.	
7	North Outfall	Potential releases of AFFF may enter	Proceed to SI, focus on
		drainage ditches through this outfall.	sediment and surface water.
8	South Outfall	Potential releases of AFFF may enter	Proceed to SI, focus on
		drainage ditches through this outfall.	sediment and surface water.

AFFF = Aqueous film-forming foam.

FD = Fire department.

FETA = Fire equipment testing area.

PRL = Potential release location.

SI = Site inspection.

Table 2. PFOS/PFOA SI Screening Criteria

Parameter	Chemical Abstract Service Number	EPA RSL for Tap Water <sup>a</sup> (ng/L)	EPA Health Advisory <sup>b</sup> (ng/L)	Residential Risk-based Soil Screening Level <sup>c</sup> (µg/kg)
PFOS	1763-23-1	NA	$70.0^{d}$	1,260
PFOA	335-67-1	NA		1,260
PFBS	375-73-5	400,000 <sup>e</sup>	NA	1,260,000

<sup>&</sup>lt;sup>a</sup> EPA RSL for tap water, May 2018; target HQ = 1.

μg/kg = Micrograms per kilogram.

EPA = U.S. Environmental Protection Agency.

HQ = Hazard quotient.

NA = Not available.

ng/L = Nanograms per liter.

PFBS = Perfluorobutane sulfonate.

PFOA = Perfluorooctanoic acid.

PFOS = Perfluorooctane sulfonate.

RSL = Regional screening level.

SI = Site inspection.

<sup>&</sup>lt;sup>b</sup> Drinking Water Health Advisory for Perfluorooctanoic Acid (EPA 2016b) and Drinking Water Health Advisory for Perfluorooctane Sulfonate (EPA 2016a).

<sup>&</sup>lt;sup>c</sup> Residential risk-based soil screening levels determined by using the EPA RSL calculator (<a href="https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl\_search">https://epa.gov/risk/regional-screening-levels-rsls-generic-tables-may-2018</a>) for soil and sediment; target HQ = 1.

When PFOA and PFOS are both present, the combined detected concentrations of the compounds are compared with the 70-ng/L health advisory value.

<sup>&</sup>lt;sup>e</sup> PFBS analytical results for groundwater and surface water have been compared to the tap water screening levels; target HO = 1.

Table 3. Summary of SI Activities

	Analyzed	Soil	Soil	Groundwater	Stormwater	Sediment
PRL Name	Parameters*	Borings	Samples	Samples	Samples	Samples
1. Hangar 333	PFOS/PFOA	3	6	1	NA	NA
2. FETA – North	PFOS/PFOA	3	6	1	NA	NA
3. FETA – South	PFOS/PFOA	3	6	1	NA	NA
4. FETA – Compass Rose	PFOS/PFOA	3	6	1	NA	NA
5. Building 573	PFOS/PFOA	3	6	2	NA	NA
6.Current and Former Fire	PFOS/PFOA	2	4	1	NA	NA
Station – Building 216						
7. North Outfall	PFOS/PFOA	0	0	0	NS	1
8. South Outfall	PFOS/PFOA	0	0	0	1	NS

<sup>\*</sup> PFOS/PFOA is used generically in this SI Report to include the following six 2012 third Unregulated Contaminant Monitoring Rule emerging contaminants: PFOS, PFOA, perfluorobutane sulfonate, perfluorononanoic acid, perfluoroheptanoic acid, and perfluorohexane sulfonate. All samples were analyzed for PFOS/PFOA using U.S. Environmental Protection Agency, Method 537, revision 1.1.

FETA = Fire equipment testing area.

NA = Not Applicable.

NS = No sample collected due to no presence of sediment or surface water.

PFOA = Perfluorooctanoic acid.

PFOS = Perfluorooctane sulfonate.

PRL = Potential release location.

SI = Site inspection.

Table 4. Well Construction Details for Kingsley Field ANGB SI

	Top of Casing Elevation	Ground Elevation	Screened Interval	Total Well Depth	Well Diameter	
Monitoring Well	(ft AMSL)	(ft AMSL)	(ft BGS)	(ft BTOC)	(in.)	Casing
		PRL	. 1			
MW-KLA01-01	4,088.11	4088.01	5-15	15.5	2	PVC
		PRL	. 2			
MW-KLA02-01	4,088.40	4,088.41	5-15	15.6	2	PVC
		PRL	. 3			
MW-KLA03-01	4,089.72	4,089.66	4.8-14.8	16	2	PVC
		PRL	. 4			
MW-KLA04-01	4,086.43	4,086.39	5.2-15.2	16	2	PVC
		PRL	. 6			
MW-KLA06-01	4,089.08	4,088.98	4.7-14.7	15.5	2	PVC

Source: Top of casing elevation and ground surface elevation data for the new wells are from the monitoring well survey on May 8, 2018, by McBride Surveying Mapping (see Appendix C). Screened interval, total depth, and well diameter data in this table were obtained from the well construction diagrams provided in Appendix A.

AMSL = Above mean sea level.

ANGB = Air National Guard Base.

BGS = Below ground surface.

BTOC = Below top of casing.

PRL = Potential release location.

PVC = Polyvinyl chloride.

SI = Site inspection.

**Table 5. Water Level Measurements** 

			]	May 2018
Monitoring Well Identifier	TOC Elevation (ft AMSL)	Screened Interval	Depth to Water (ft BTOC)	Groundwater Elevation (ft AMSL)
MW-KLA01-01	4,088.11	5-15	4.32	4,083.79
MW-KLA02-01	4,088.40	5-15	3.89	4,084.51
MW-KLA03-01	4,089.72	4.8-14.8	6.25	4,083.47
MW-KLA04-01	4,086.43	5.2-15.2	2.55	4,083.88
MW-KLA06-01	4,089.08	4.7-14.7	8.24	4,080.84
MW-572-02-PRL05	4088.56	3 – 13	4.65	4083.91
MW-573-03-PRL05	4089.35	3 – 13	5.22	4084.13

Source: TOC elevation data for new wells are from the monitoring well survey on May 8, 2018 by McBride Surveying Mapping (See Appendix C). Screened interval and depth to water for the new wells were obtained from the well construction diagrams provided in Appendix A. TOC elevation and screening interval for the two existing wells were obtained from the 2014 SI Report (ANG 2014). Depth to water data for the existing wells is from the 2018 SI.

AMSL = Above mean sea level.

BTOC = Below top of casing.

TOC = Top of casing.

Table 6. Water Quality Parameters

				Groundwater	ľ		
	MW-KLA01-01   MW-KLA02-01	MW-KLA02-01	MW-KLA03-01	MW-KLA04-01	MW-KLA06-01	MW-KLA06-01   MW-572-02-PRL05   MW-573-03-PRL05	MW-573-03-PRL05
Parameter	5/6/2018	5/6/2018	5/6/2018	5/6/2018	5/6/2018	5/6/2018	5/6/2018
Dissolved oxygen (mg/L)	8.16	2.02	0.09	0.31	9.61	8.89	0.23
ORP (mV)	128	177	-247	-159	-187	168	115
pH (S.U.)	8.00	80.6	8.62	95.6	8.25	9.51	8.69
Conductivity (mS/cm)	19.6	4.31	1.18	1.63	66'0	0.92	1.29
Temperature (°C)	15.8	16.0	14.3	15.6	14.2	15.8	15.9
Turbidity (NTU)	67.7	333	471	292	150	43.5	51.1

mg/L = Milligrams per liter.
mS/cm = MicroSiemens per centimeter.
mV = millivolt.
NTU = Nephelometric turbidity unit.
ORP = Oxidation-reduction potential.
S.U. = Standard unit.

Table 7. Summary of Soil and Sediment Analytical Results

Perfluorononanoic Acid (PFNA)	NA	(µg/kg)		0.25 U	0.26 U	0.22 U	$0.26\mathrm{U}$	0.25 U	0.25 U	0.26 U	$0.24\mathrm{U}$	0.26 U	0.38	$0.30 \mathrm{~J}$	0.34 J	0.40	0.12 J	0.26 U	0.26 U	0.25 U	$0.26\mathrm{U}$	0.26 U	0.27 U	0.27 U
Perfluorohexane Sulfonate (PFHxS)	NA	(µg/kg)		18	9.1	1.5	2.4	1.3 U	0.32 J	2.6	1.6	1.7	21	130 J	110 J	5.4	9.4	0.99	2.4	0.71	0.71	1.1	2.7	12
Perfluoroheptanoic Acid (AqH49)	NA	(µg/kg)		0.38	0.32 J	$0.22\mathrm{U}$	0.14 J	0.25 U	0.25 U	$0.16  \mathrm{J}$	$0.18  \mathrm{J}$	$0.11  \mathrm{J}$	1.1	6.0	5.6	0.47	0.81	$0.26\mathrm{U}$	$0.26\mathrm{U}$	$0.25\mathrm{U}$	$0.26\mathrm{U}$	$0.26\mathrm{U}$	0.36 J	0.59
Perfluorobutane Sulfonate (PFBS)	1,260,000	(µg/kg)		0.31 J	0.31 J	0.072 J	0.15 J	0.13 J	0.23 U	0.25 J	0.22 J	0.21 J	5.1	26	24	0.50	1.8	$0.082 \mathrm{~J}$	0.21 J	$0.10 \mathrm{ J}$	0.098 J	0.15 J	0.21 J	0.75
Perfluorooctanoic Acid (PFOA)	1,260	(µg/kg)		3.9	1.0	$0.30 \mathrm{~J}$	0.39	0.22 J	0.25 U	0.46	$0.28\mathrm{J}$	0.25 J	2.2	18	15	0.45	1.0	$0.26\mathrm{U}$	0.22 J	0.15 J	$0.16  \mathrm{J}$	0.15 J	0.37 J	1.3
Perfluorooctane Sulfonate (PFOS)	1,260	(µg/kg)		430 J	210 J	1.7	3.2	10	1.1 J	1.6 J	6.1	12	390 J	570 J	$490  \mathrm{J}$	140 J	21	3.0	17	3.4	2.7	4.9	3.2	14
Analyte	Screening Level*	Sample Type	Soil	REG	REG	REG	REG	REG	REG	REG	REG	FD	REG	REG	FD	REG	REG	REG	REG	REG	FD	REG	REG	REG
	Screeni	Sample Depth (ft)		0-2	2-6	0-2	2-9	0-2	5.5-6.5	0-2	4.5-5.5	4.5-5.5	0-2	3.5-4.5	3.5-4.5	0-2	4-5	0-2	9-9	0-2	0-2	5.5-6.5	0-2	5.5-6.5
		Sample Date		5/2/18	5/2/18	5/2/18	5/2/18	5/2/18	5/2/18	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/1/18	5/1/18	5/2/18	5/2/18	5/2/18	5/1/18	5/1/18
		Sample Identifier		KLA01-SB1-01	KLA01-SB1-02	KLA01-SB2-01	KLA01-SB2-02	KLA01-SB3-01	KLA01-SB3-02	KLA02-SB1-01	KLA02-SB1-02	KLA02-SB1-02D	KLA02-SB2-01	KLA02-SB2-02	KLA02-SB2-02D	KLA02-SB3-01	KLA02-SB3-02	KLA03-SB1-01	KLA03-SB1-02	KLA03-SB2-01	KLA03-SB2-01D	KLA03-SB2-02	KLA03-SB3-01	KLA03-SB3-02
		Location		KLA01-SB1	KLA01-SB1	KLA01-SB2	KLA01-SB2	KLA01-SB3	KLA01-SB3	KLA02-SB1	KLA02-SB1	KLA02-SB1	KLA02-SB2	KLA02-SB2	KLA02-SB2	KLA02-SB3	KLA02-SB3	KLA03-SB1	KLA03-SB1	KLA03-SB2	KLA03-SB2	KLA03-SB2	KLA03-SB3	KLA03-SB3
		PRL		1						2								3						

Table 7. Summary of Soil and Sediment Analytical Results (continued)

									1	1	1		1		1					
Perfluorononanoic Acid (PFNA)	NA	(ga/gn)	0.16J	09.0	1.6 J	1.6	1.1 J	1.2	0.61	2.8	0.25 U	0.36	0.34 J	2.6 J	0.25 J	2.4	1.4	1.6	1.7 J	1.8 J
Perfluorohexane Sulfonate (PFHxS)		(ga/gπ)	24	190 J	100	$1100  \mathrm{J}$	£3 J	130 J	18 J	$300  \mathrm{J}$	2.6	20	8.9	f 0 <b>S</b> 9	15	111	8.9	44 J	45 J	45 J
Perfluoroheptanoic Acid (AqHAq)	NA	(ga/gn)	99.0	4.4	14	44 J	3.8	67	1.6	1.8	0.25 U	0.45	$0.38 \mathrm{ J}$	14	1.5	0.71	0.25 J	1.2 J	1.6	1.0
Perfluorobutane Sulfonate (PFBS)	1,260,000	(µg/kg)	0.45 J	14	14 J	84 J	19	$110  \mathrm{J}$	4.9	3.1	0.077 J	0.32 J	0.29 J	6.7	0.58	0.27J	0.19 J	66.0	2.1	1.4
Perfluorooctanoic Acid (PFOA)	1,260	(ga/gπ)	3.2	19	f 97	100	12	f \$8	2.3	12	0.23 J	9.1	1.2	62 J	3.8	1.3	1.1	ſ L'9	6.4	4.1
Perfluorooctane Sulfonate (PFOS)	1,260	(µg/kg)	2200 J	3600 J	6600 J	4800 J	4500 J	3800 J	170 J	f 059	6.5	40 J	42 J	14000 J	f 086	250 J	120 J	f 096	1600 J	1100 J
Analyte	Screening Level*	Sample Type	REG	REG	REG	REG	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG	REG	REG	FD
	Screeni	Sample Depth (ft)	0-2	4.5-5.5	0-2	4.5-5.5	0-2	5.5-6.5	0-2	0-2	2-6	0-2	2-6	0-2	5.5-6.5	0-2	4.5-5.5	0-2	4.5-5.5	4.5-5.5
		Sample Date	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/4/18	5/5/18	5/5/18	5/5/18	5/5/18	5/5/18	5/5/18	5/5/18	5/1/18	5/1/18	5/1/18	5/1/18	5/1/18
		Sample Identifier	KLA04-SB1-01	KLA04-SB1-02	KLA04-SB2-01	KLA04-SB2-02	KLA04-SB3-01	KLA04-SB3-02	KLA05-SB1-01	KLA05-SB1-01D	KLA05-SB1-02	KLA05-SB2-01	KLA05-SB2-02	KLA05-SB3-01	KLA05-SB3-02	KLA06-SB1-01	KLA06-SB1-02	KLA06-SB2-01	KLA06-SB2-02	KLA06-SB2-02D
		Location	KLA04-SB1	KLA04-SB1	KLA04-SB2	KLA04-SB2	KLA04-SB3	KLA04-SB3	KLA05-SB1	KLA05-SB1	KLA05-SB1	KLA05-SB2	KLA05-SB2	KLA05-SB3	KLA05-SB3	KLA06-SB1	KLA06-SB1	KLA06-SB2	KLA06-SB2	KLA06-SB2
		PRL	4						5							9				

Table 7. Summary of Soil and Sediment Analytical Results (continued)

Perfluorononanoic Acid (PFNA)	NA	(ga/gη)		$0.22\mathrm{U}$	$0.27\mathrm{U}$
Perfluorohexane Sulfonate (PFHxS)	NA	(ga/gn)		$0.22\mathrm{U}$	2.1
Perfluoroheptanoic Acid (APHPA)	NA	(ga/gn)		$0.22\mathrm{U}$	0.12 J
Perfluorobutane Sulfonate (PFBS)	1,260,000	(µg/kg)		$0.19\mathrm{U}$	$0.20 \mathrm{~J}$
Perfluorooctanoic Acid (PFOA)	1,260	(µg/kg)		0.22 U	0.48
Perfluorooctane Sulfonate (PFOS)	1,260	(µg/kg)		1.5 U	51
Analyte	Screening Level*	Sample Type	Sediment	REG	FD
	Screen	Sample Depth (ft)		0	0
		Sample Date		5/6/18	5/6/18
		Sample Identifier		KLA07-SD1 KLA07-SD1-01	KLA07-SD1   KLA07-SD1-01D
		Location		KLA07-SD1	KLA07-SD1
		PRL		7	•

\* U.S. Environmental Protection Agency (EPA) residential risk-based soil screening level determined using the EPA regional screening level (RSL) calculator and May 2018 EPA RSL tables.

Bold denotes detected concentration.

$$\label{eq:model} \begin{split} \mu g/kg = Micrograms \ per \ kilogram. \\ FD = Field \ duplicate. \end{split}$$

NA = Not applicable. PRL = Potential release location.

REG = Regular.

U = Chemical not detected above the laboratory detection limit. J = Estimated concentration.

Table 8. Summary of Groundwater and Surface Water Analytical Results

Perfluorononanoic Acid (PFNA)		NA	(ng/L)		0.56J	340J	16	1.5U	3.8	3.9	200J	490J		0.95 J	
Perfluorohexane Sulfonate (PFHxS)		NA	(ng/L)		220	f00099	2700J	f069	360J	390J	39000J	680001		3.7	
Perfluoroheptanoic Acid (PFHpA)	NA	NA	(ng/L)		9.7	7700J	200	27	25	24	5100J	5400J		1.5 J	
Perfluorobutane Sulfonate (PFBS)		400,000	(ng/L)		39	6700J	180	96	27	28	3900J	7900J		0.96 U	
PFOS+PFOA	20	NA	(ng/L)		520	401,000	6390	141	1156	1257	69,700	144,000		29.8	
Perfluorooctanoic Acid (PFOA)		NA	(ng/L)		20	21000	290	41	99	57	f0029	14000J		1.8 J	
Perfluorooctane Sulfonate (PFOS)	20	NA	(ng/L)		\$00J	380000J	6100J	100	1100J	1200J	63000J	130000J		28	
Analyte	Health Advisory <sup>a</sup>	p Water <sup>b</sup>	Sample Type	Groundwater	REG	REG	REG	REG	REG	FD	REG	REG	Surface water	REG	
	Health ∤	EPA RSL Tap Water <sup>b</sup>	Sample Depth (ft)	Grou	10	10	10	10	10	10	10	10	Surf	NA	
			Sample Date		5/6/18	5/6/18	5/6/18	5/6/18	5/6/18	5/6/18	5/6/18	5/6/18		5/7/18	
			Sample Identifier		MW-KLA01-01-01	MW-KLA02-01-01	MW-KLA03-01-01	MW-KLA04-01-01	MW-572-02-PRL05- 01	MW-572-02-PRL05- 01D	MW-573-03-PRL05- 01	MW-KLA06-01-01		KLA08-SW1-01	
			Location		MW-KLA01-01	MW-KLA02-01	MW-KLA03-01	MW-KLA04-01	MW-572-02- PRL05-01	02-	MW-573-03- PRL05	MW-KLA06-01		KLA07-SW1	
			PRL		1	2	3	4	5			9		8	

 $<sup>^{\</sup>rm a}$  May 2016 EPA health advisory for PFOS/PFOA combined.  $^{\rm b}$  May 2018 EPA RSL for tap water.

Bold denotes detected concentration.

**801d** highlighted denotes concentration that exceeds screening criteria.

EPA = U.S. Environmental Protection Agency.

FD = Field duplicate.

NA = Not applicable.

ng/L = Nanograms per liter. PRL = Potential release location.

RSL = Regional screening level.

REG = Regular.

Data Qualifiers:

J = Estimated concentration.

U = Chemical not detected above the laboratory detection limit.

Table 9. SI Recommendation Summary Table

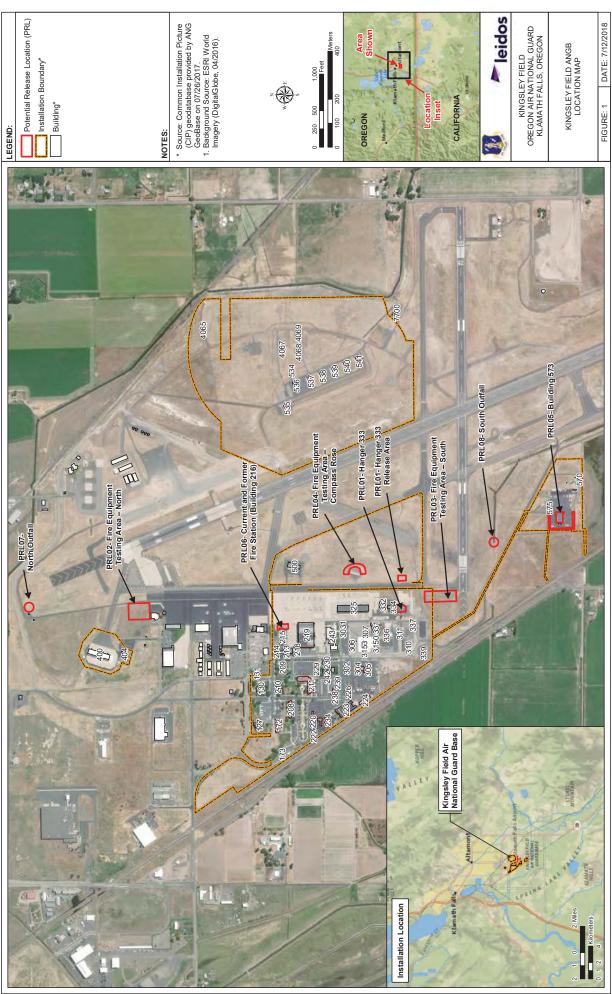
PRL No.	PRL Description	Constituents Above Screening Criteria	Sampling Recommendations and Objectives
1	Hangar 333	Groundwater: PFOS + PFOA	Soil: Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Although soil screening criteria were not exceeded at PRL 1, there were exceedances in groundwater at the downgradient well MW-KLA01-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
2	FETA – North	Groundwater: PFOS + PFOA	Soil: Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Although soil screening criteria were not exceeded at PRL 2, exceedances occurred in groundwater at downgradient well MW-KLA02-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
8	FETA – South	<b>Groundwater:</b> PFOS + PFOA	<b>Soil:</b> Although screening criteria were not exceeded, additional surface and subsurface soil samples are proposed to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration. <b>Groundwater:</b> Although soil screening criteria were not exceeded at PRL 3, exceedances occurred in groundwater at downgradient well MW-KLA03-01. Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
4	FETA – Compass Rose	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to further define the nature and extent of PFOS soil exceedances and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
8	Building 573	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to determine the extent of the one PFOS exceedance and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.
9	Current and Former Fire Station – Building 216	Soil: PFOS Groundwater: PFOS + PFOA	Soil: Additional surface and subsurface soil samples are proposed to determine the extent of the one PFOS exceedance and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: Determine the nature and extent both vertically and horizontally through the sampling of existing and additional new monitoring wells.

Table 9. SI Recommendation Summary Table (continued)

		Constituents Above Screening	
PRL No.	PRL Description	Criteria	Sampling Recommendations and Objectives
7	North Outfall	None	<b>Surface Water and Sediment</b> : PFOS/PFOA compounds were detected in sediment below screening criteria. Determine the PFOS/PFOA impact to surface water through additional upgradient sampling of surface water and sediment and evaluate potential downgradient impacts at the outfall located off Base.
∞	South Outfall	None	Surface Water and Sediment: PFOS/PFOA compounds were detected in surface water below screening criteria. Determine the PFOS/PFOA impact to surface water through additional upgradient sampling of surface water and sediment and evaluate potential downgradient impacts at the outfall located off Base.
	General		Soil: Collect additional surface and subsurface soil samples to determine the nature and extent both vertically and horizontally of the exceedances and to determine if an unidentified source exists and if so, to determine the nature and extent in the vertical and horizontal directions given the potential for soil to groundwater migration.  Groundwater: (1) Collect additional groundwater samples in upgradient locations to quantify potential impacts from upgradient sources, and (2) collect additional groundwater samples off Base through the installation of a limited number of new monitoring wells to determine if PFOS/PFOA impacts beyond the Base boundary are increasing or decreasing.  Surface Water/Sediment: (1) Collect additional surface water and sediment samples in upgradient locations to quantify potential impacts from upgradient sources; (2) collect additional surface water and sediment samples from downgradient locations off Base to define the nature and extent of PFAS contamination beyond the Base boundary.

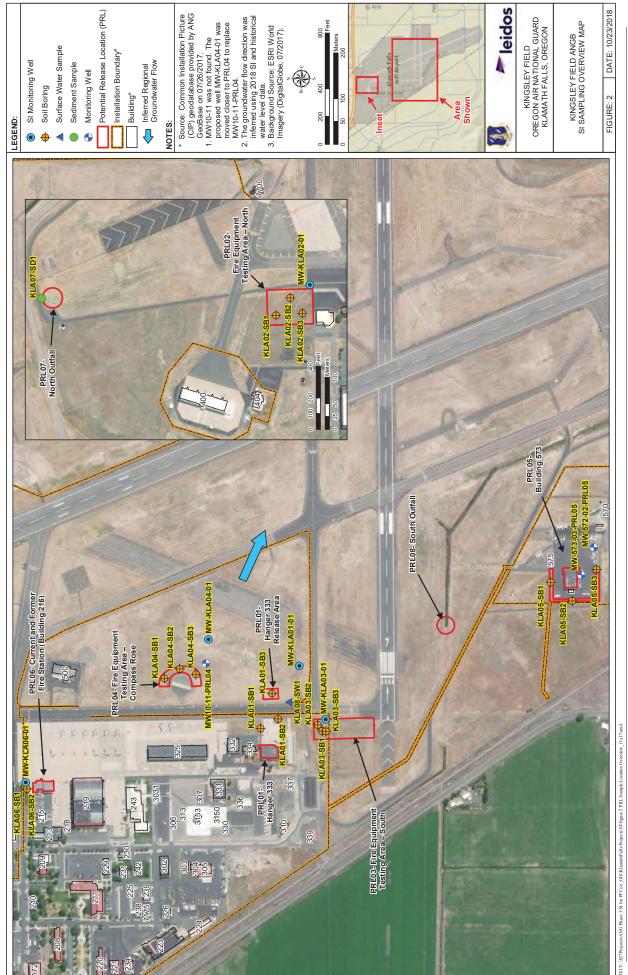
**FIGURES** 

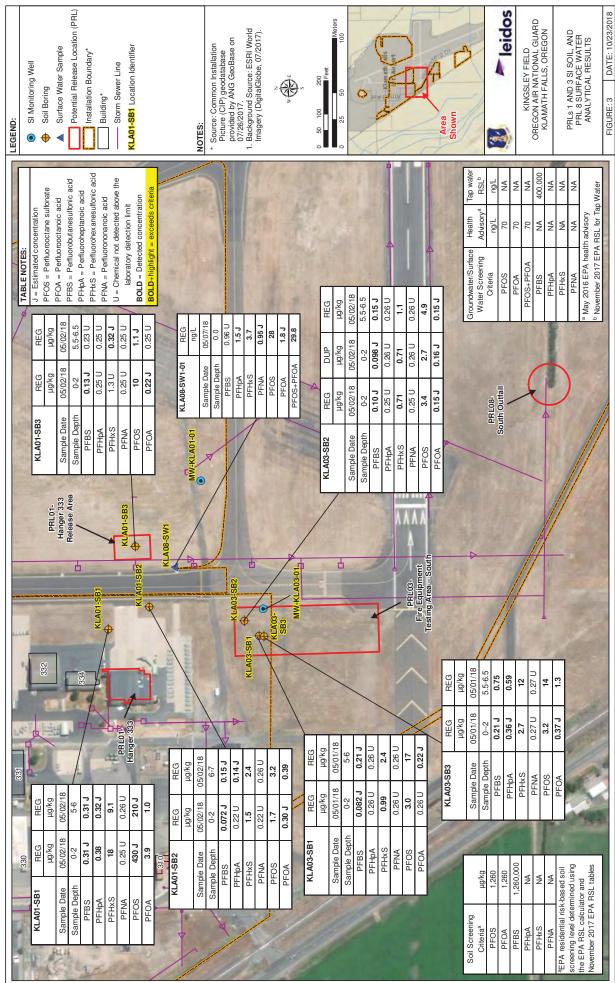
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Kingsley Field Air National Guard Base

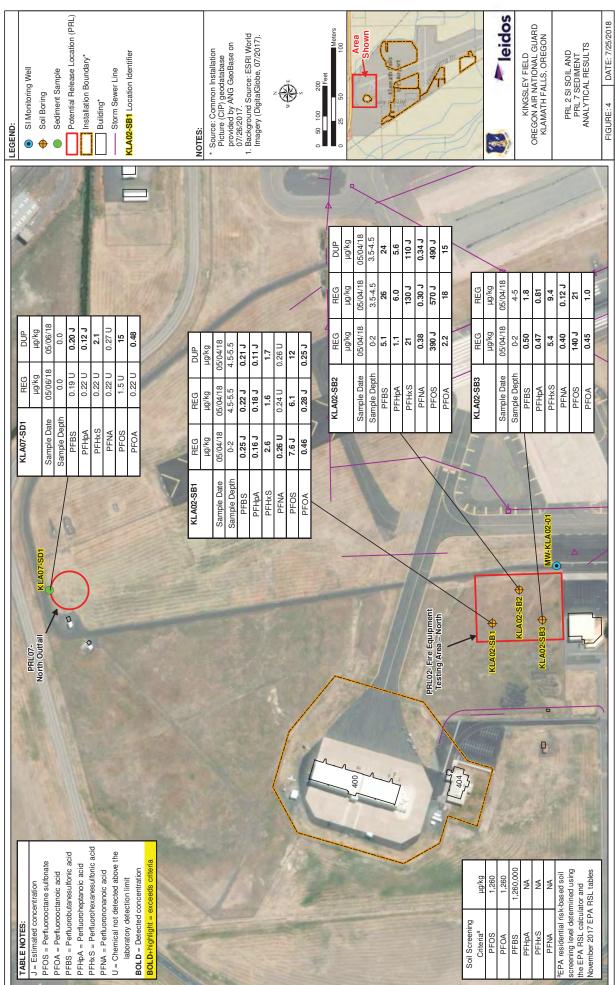




OJECT: 3827Projects/ANG Phase 3 SI for PFCs/v\_GIS/KlamathFalls/Projects/SIFFigure 3 PRL 01 08 Soil PRL 08 SW Results.mxd

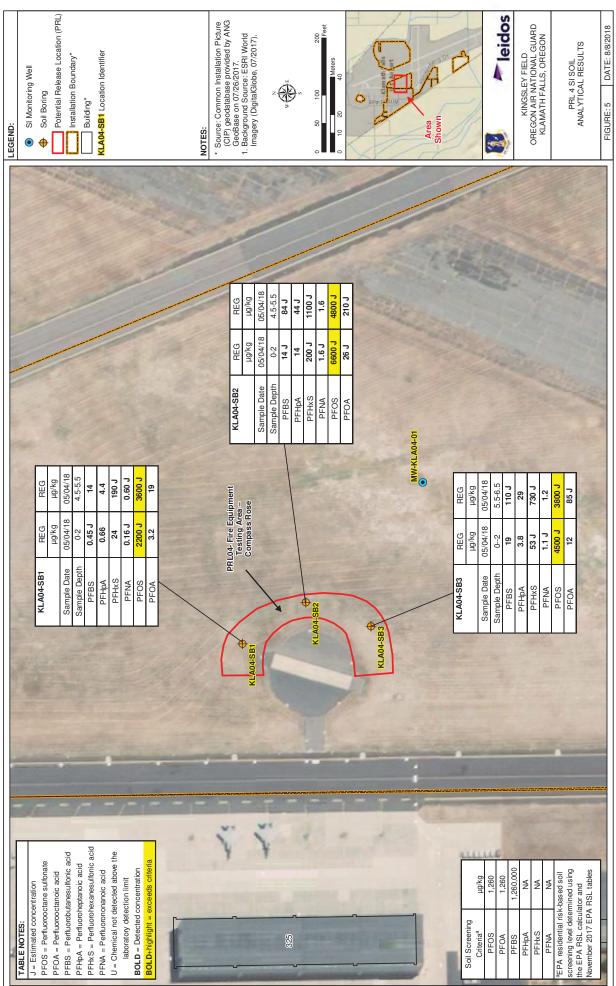
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ROJECT: 3827Projects/ANG Phase 3 SI for PFCs/z\_GIS/KlamathFalls/Projects/SIP/gure 4 PRL 02 Soil PRL 07 Sediment Results\_11x17.mxd

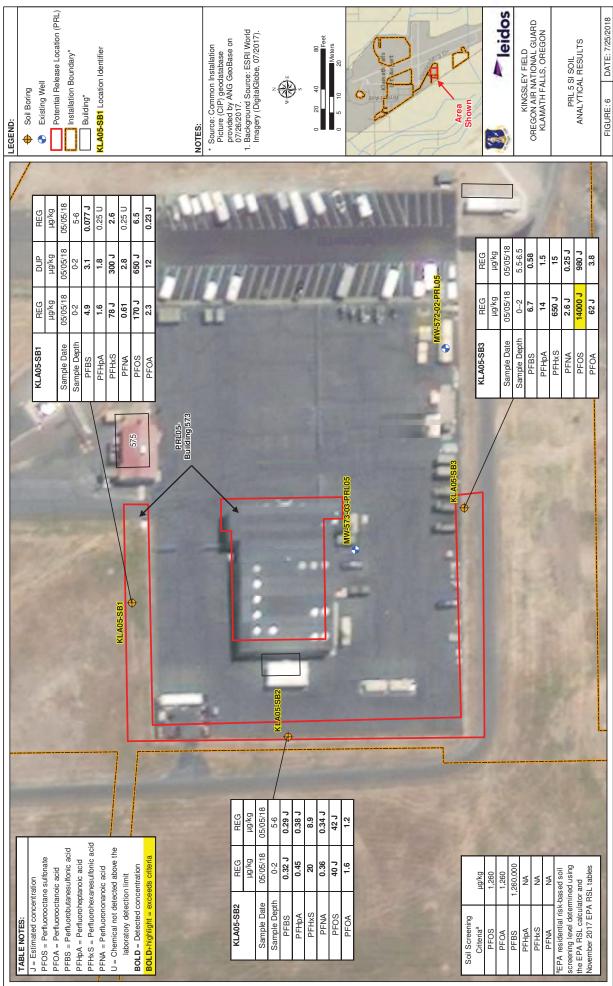
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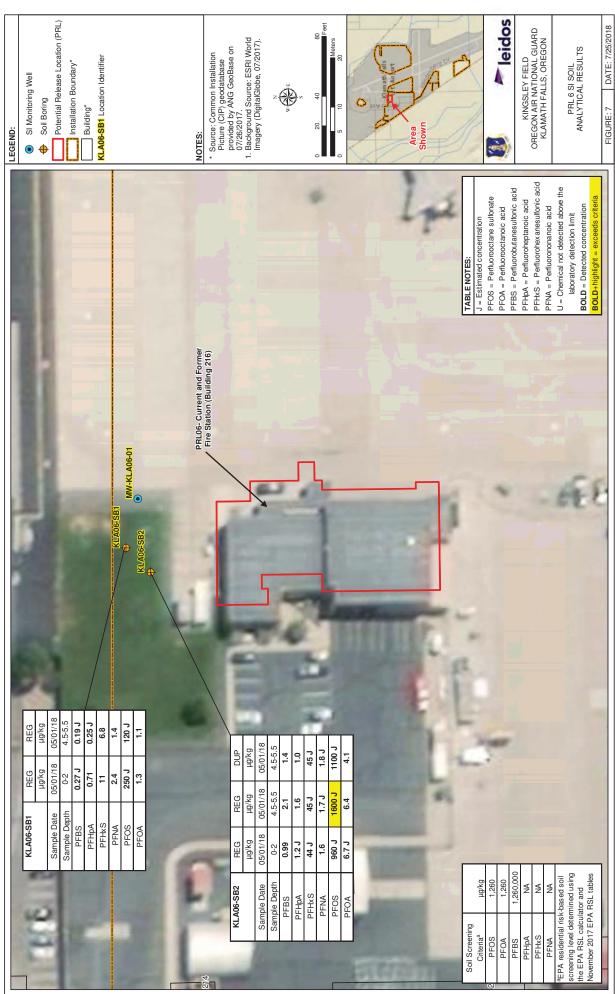
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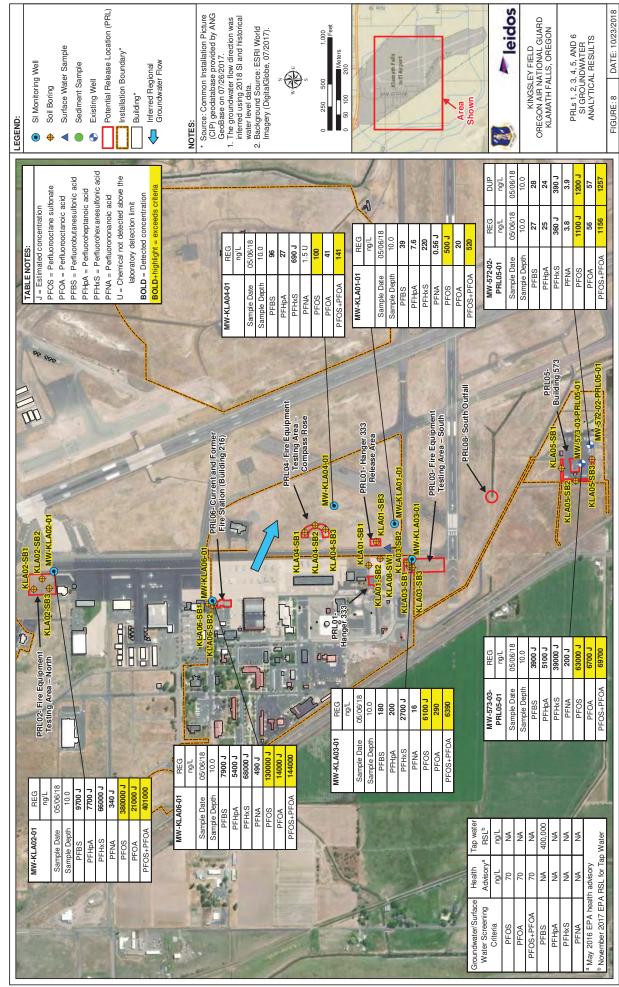
ROJECT: 3827Projects/ANG Phase 3 SI for PFCs/z\_GIS/KlamathFalls/Projects/SIFigure 6 PRL 05 Soil Results\_11x17.mxd

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Final Site Inspection Report Kingsley Field Air National Guard Base

# APPENDIX A SOIL BORINGS AND WELL CONSTRUCTION LOGS

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Client/Installation ANG/Klamati	h ANGB	Oversight	Contractor Leidos		Borehole Number KLA03-SB_3		
Project		Driller :.C	assade 5tm	Horc	Page		
FY17 Phase 3 Regional SI for PF	OS/PFOA		ANG/Klamath ANGB Page 1 of				
Sizes and Type of Drilling and Si Geoprober 78		/Han.	lange		Location Description		
Date/Time Started :			Date/Time	/18			
Overburden Thickness		oundwater 75			th 10 ft		
Sample for PFOS/PFOA Analysis			-	PFOS/PFOA			
Sample ID: KLAOT-SB3				D: KLAO			
Sample Interval: 0 to 2	ft				5.5 to <u>6</u> 5ft		
	is Wildt			M W			
Monitoring Well ID:	Backfill Type	en ton	, bec	Date Back	ifilled :		
Latitude	Longitude			Elevation	(ft)		
Notes:				•			
Sketch:			T	1	TIT		
				-			
	87 28	1					
	Ø 5/	3					

Client/Installati	ANG/Klamath ANGB		mber 03-SB	Page 2 of 2_	
roject Y17 Phase 3 Regional SI for PFOS/PFOA		Inspector Name Chris Wildt		Date: 5 · 1 · 18	
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:	
1 1.5	brown silty SAND SM, Ly Loose	00		KLA 03-583-01	
	Brown fine SAND SM, Lamp, medium dense	(0.0			
5	Soun silty SAND solo grown, SM saturated, med.	0.0		KLA03-583-02	
9 9.5	BOE				

### SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLA03 -SB3 SAMPLING POINT: SAMPLE LOCATION: Soil SAMPLE MEDIA: SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample Data Sample No. 1 FIELD READING UNITS KLA 03 -SB 3-01 0.0 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-2' 51.18 0845 Date/Time: NO. CONTAINERS & CONTAINER COLLECTION PRESERVATION TYPE VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY CODE\*\* PFOS/PFOA 1-40z cold, no preservative SAC plastic READING UNITS Sample Data Sample No. 2 FIELD SAMPLE ID NUMBER: KLA 07-SB3-02 PID 0.0 ppm SAMPLE DEPTH: Date/Time: 5-118 0280 55.65 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME CODE\*\* TYPE ANALYSIS (TYPE/VOL) LABORATORY 1-40Z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME

COMPANY

COMPANY

Client/Installation ANG/Klan	ent/Installation Oversight Co ANG/Klarnath ANGB		Contractor Leidos		Borehole Number KLA 03-SB		
Project		Driller : Cas	scade		Page		
FY17 Phase 3 Regional SI fo	r PFOS/PFOA	A	NG/Klamath A	NGB	Page _ 1 _ of _ 2		
Geoprabe 7				Location Description			
sate/Time Started : S / 18	0855		Date/Time F	inished:			
overburden Thickness		Groundwater		white was	io`		
ample for PFOS/PFOA Analysis			Sample for P	FOS/PFOA	Analysis		
Sample ID: KLA 3-SI	B01		Sample II	: KLAO3	2-SB_/02		
Sample Interval: 0 t	0 2 ft		Sample In	ntervalı_	toft		
nspector Name	Chris Wildt		Inspector 5lg	mature //M	WA		
Monitoring Well ID :	Backfill Ty	se toni	te	Date Back	filled:		
atitude	Longitude	•	Elevation (ft)				
Notes: Sketch:							
			-				
		Q	SBI				
		-					
		Ø.	SAZ				
		-	-	_			

Client/Installa	ANG/Klamath ANGB		nber 07-SB_I	Page _ 2 _ of _ 2		
Project FY17 Phase 3 f			me is Wildt	Date: 5 1.18		
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:		
1 1.5	103/Z Very derk grapish brown SAND, SW, dry, 1003e	0.1		KLASI-SBI-01 @ 0900		
3.5	104R S/3 Brown 5.14y SHND SM damp, med. Lenen	0.0		KLA03-381-02		
6.5	104R3/1 Very dark gray SAND SM saturated, med. dense			KLA03-381-02		
9 9.5	BOE					

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAO3-SB/ SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab SAC - TestAmerica Sacramento LOGBOOK NUMBER: Sample No. 1 FIELD READING UNITS Sample Data KLA03 -SB (-01 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: Date/Time: \$ / 18 0800 0-2" NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION LABORATORY CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) PFOS/PFOA SAC 1-40z cold, no preservative plastic READING UNITS Sample Data Sample No. 2 FIELD SAMPLE ID NUMBER: KLA\_\_-SB\_\_-02 PID ppm SAMPLE DEPTH: Date/Time: 5-1-18 5-6 0905 NO. CONTAINERS & PRESERVATION TYPE COLLECTION CONTAINER CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY 1-40z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation ANG/Klamath A	NGB	Oversight C	ontractor Leidos		Borehole Number KLACG-SBZ		
Project		Driller : Cas	Driller : Cascade		Page		
FY17 Phase 3 Regional SI for PFOS/	PFOA	A	NG/Klamath A	Spinish Street, or other Designation of the last of th	Page 1	_ of2	
Geopole 782	eling Equipment			and the state of the state of the	F AWKLAOG	0	
S 1.18 / 1330			Date/Time F	inished :	1400	)	
Overburden Thickness	Depth to G	iroundwater		Total Depth	10'		
Sample for PFOS/PFOA Analysis		Sample for P	FOS/PFOA Ar	alysis	-		
Sample ID: KLA26-SB_201			Sample ID	): KLACG-5	B <u>2</u> 02		
Sample Interval: 0 to 2 ft			Sample Jr	terval:	toft		
Inspector Name Chris \	Wildt		Inspector/Sig	mature	1		
Monitoring Well ID :	Backfill Typ	Forite	,	Date Backfill	ckfilled:		
Latitude /	Longitude		Elevati		ion (ft)		
Sketch:							
			8 582				
		-					
8 81							
	CONC	nh					

ANG/Klamath ANGB Project Y17 Phase 3 Regional SI for PFOS/PFOA		-	Page 2 of 2		
			Date: 5 - 1 - 18		
Description of Materials	Headspace Reading	Analytical Sample Interval	The state of the s		
104R4/4 Dark yellowish brown silly SAND 5% gravel, SM, dry, loose	0.0		KLAOG-SB-2-01		
10VR-3/1 Very darle gray clayery SAND, CL, damp, med. dense	00		RLA06-SB-2-07 @ 135-0 + Oup.		
104R 3/4 Oark Vellewish Brown SAND, SW sontrated, loose	G. O				
	ANG/Klamath ANGB  Regional SI for PFOS/PFOA  Description of Materials  2 rass  1048 4/4 Dark yellowish brown SILLY SAND 5% gravel, SM, dry, loose  1048 3/1 Very dark gray clayery SAND, CL, damp, med. Lense	ANG/Klamath ANGB  Regional SI for PFOS/PFOA  Description of Materials  Description of Materials	ANG/Klamath ANGB  Regional SI for PFOS/PFOA  Regional SI for PFOS/PFOA  Description of Materials  Description of Materials	ANG/Klamath ANGB  Regional SI for PFOS/PFOA  Description of Materials  Reading  Analytical Sample Interval  Notes:  KLAOG -SB-Z-OI  DIVE 4/4 Dank Valibuish O.O  DIVE 5/9 gravel, SM,  Drown Silly SAND  Sy gravel, SM,  Dry, loose  ICYR-3/1 Very donle gray clayery SAND, CL,  damp, Med. derse  O DEC 1350  FOAP.	

SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOG-SBZ SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample Data Sample No. 1 FIELD READING UNITS KLA06-SB Z-01 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-2 Date/Time: 5 / 18 345 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME LABORATORY CODE\*\* TYPE ANALYSIS (TYPE/VOL) 1-4oz PFOS/PFOA cold, no preservative SAC plastic READING UNITS Sample Data Sample No. 2 FIELD SAMPLE ID NUMBER: KLAOG-SBZ-02 PID ppm SAMPLE DEPTH: 4.5-55 Date/Time: 5-1-18 135 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS LABORATORY CODE\*\* (TYPE/VOL) 1-40z PFOS/PFOA cold, no preservative plastic SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate + MS/MSD COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME

COMPANY

COMPANY

Client/Instal	ANG/Klamath ANGB		Oversight C	ontractor Leidos		Borehole Number KLA06-SB			
Project			Driller : Cas	cade Str	Page				
THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	Regional SI for PFOS/PF		-	ANG/Klamath ANGB Page 1 0					
	pe of Drilling and Sampli	ng Equipment				of SBZ			
S · / - 18	tarted: 1410			Date/Time I					
Verburden 31	Thickness	The second second	Groundwater		-	101			
ample for P	FOS/PFOA Analysis			Sample for I	Name and Address of the Owner, where				
Sample II	: KLA06-SB_101			Sample II	: KLACK	SSB_1 02			
Sample Ir	nterval: 0 to 2 ft			Sample J	nterval: 4	1.5 to 5.5 ft			
nspector Na	ime			Inspector Si		/			
	Chris W			1//m	MAY				
Monitoring \	Well ID :	Backfill To	for ite	Date Backfilled:					
atitude		Longitude			Elevation	(ft)			
Notes:									
Sketch:		1	T						
		-	+		-				
				& 5B	2				
	∞ 68.1								
		-							
	conenc	1							

Client/Installation ANG/Klamath ANGB		Borehole Nu KLA	mber	Page of2
Project FY17 Phase 3	Regional SI for PFOS/PFOA	Inspector Na	-	S 1.18
Depth	Description of Materials	Headspace Reading	Analytical Sampl Interval	
1 15 2	104R 5/3 Brain silty SAND w/ 12/6 grand, SM, Cose, dry	0.0		KLAGG-SB-1-01
4 =	104R3/1 Very dark gray Silly SAND, SM, damp, red Line  104R3/2 very dark grayish brown SAND, SW, wit, med dense			KLAUG SB-1-02 @ 1420
6.5	SAA			

SAA - same as above

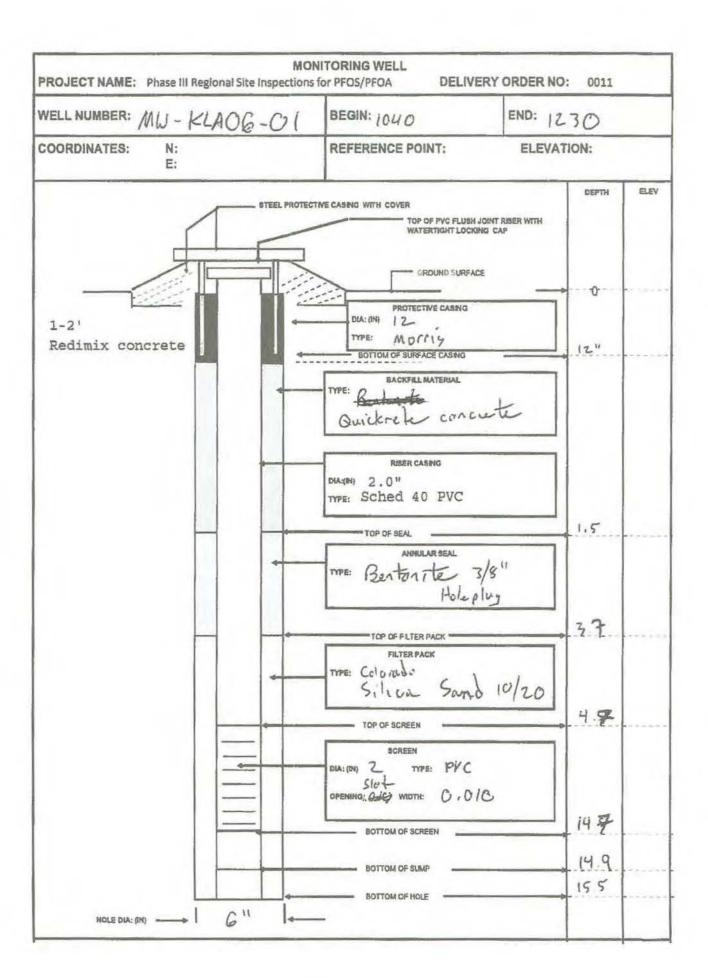
## SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD **DELIVERY ORDER 0011** PROJECT NAME: Kingsley Field ANGB Borehole Data KLACG -SB SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil Grab SAMPLE TYPE LOGBOOK NUMBER: SAC - TestAmerica Sacramento READING UNITS Sample No. 1 FIELD Sample Data KLACG -SB / -01 SAMPLE ID NUMBER: PID 0.0 ppm SAMPLE DEPTH: 0-2" Date/Time: 1415 51.18 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS LABORATORY CODE\*\* (TYPE/VOL) PFOS/PFOA 1-4oz plastic cold, no preservative SAC Sample No. 2 FIELD READING UNITS Sample Data KLACG-SB 1-02 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 4.5-55 1420 Date/Time: 51-18 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY CODE\*\* 1-4oz plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" Insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Insta	liation ANG/Klan	nath ANG	1	Oversight C	Leidos		Borehole Nu	mber V-KLA <u>O</u> £	<u>s-01</u>
Project				Driller : 686	eade Strak	9	Page		
FY17 Phase	3 Regional SI fo	r PFOS/PFOA		A	NG/Klamath A	NGB	Pag	e_1_ of_	4
Sizes and Ty Geopral	rpe of Drilling and T&22	nd Sampling I	Equipment				Cation Descrip	shor Pi	+
S / 1 / 18		)			Date/Time F	18/			
Overburden -			Depth to Gro	undwater G	, ,	Total Depth	5' (ref	usul)	
	PFOS/PFOA Ana	-							
	D: MW-KLA	<u>06-01</u> 01			1 1/2	An			
Inspector N		Chris Wild	÷		Inspector Sig	Unit			
Monitoring MW-1	Well ID: CLA 06 - (		Benton		0	Date Backfill		370	
Latitude			Longitude			Elevation (ft	)		
Notes: Sketch:									
		7,911							
						co bbles	nu		
			Ø MW			Land Sco		ly y	J
								Conc	
					1		H		
A,	Con	inle							
NN									

llent/installation ANG/Klamath ANGB		Borehole Num MW-K	ber LACG-OI	Page 2 of 4		
Project FY17 Phase 3 R	egional SI for PFOS/PFOA		Wildt	Date: S · 1   8		
Depth	Description of Materials	Headspace Reading	Analytical Sampi Interval	Notes:		
0.5	10484/3 Brawn silly SAND, SM, dy	0.0				
3.5						
5.5	brown SAND, SM with med tree	0.1				

Client/installation		Borehole Num		Page		
ANG/Klamath ANGB		The second second	LACE- OI	-	ge_3_ of_4_	
Project	2004	Inspector Nan		Date:	8	
FY17 Phase 3 Regional SI for PFOS/	PFOA		Analytical Sample		0	
Depth Descriptio	n of Materials	Reading	Interval		Notes:	
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= =						=
11.0				1		-
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11.5	01					-
3 104R414	HURYU 10013 L	0.0		1		=
12.0 - Carl NA	SAND SW			1		-
= 3/00	1 . 1 1					-
12.5 _ Saturin les	Darkyellowish SAND, SW L, med. des	4				Man
=						=
13.0		1				
		1 3				-
13.5				1		=
						-
3						-
4.0						
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14.5						_
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5.0 - too return	1000	1		1		_
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5 - V		_				_
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50 = Be	E	1				_
= 125				1		=
6.5						COLUMN TOWNS
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19.5						
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llent/installati		Borehole Num		Page		
NG/Klamath ANGB roject Y17 Phase 3 Regional SI for PFOS/PFOA			LACE-DI	Page _4 of _4 Date:		
		Inspector Nam				
			Wildt			
Depth	Description of Materials	Reading	Analytical Sample Interval	Notes:		
рерип	Description of Materials	-		Mutes		
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4.5	100				-	
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=					=	
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=		1 1				
6.5					=	
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=		1 1			13	
27		1 1			-3	
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7.5					=	
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8.5					-	
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9.5					13	
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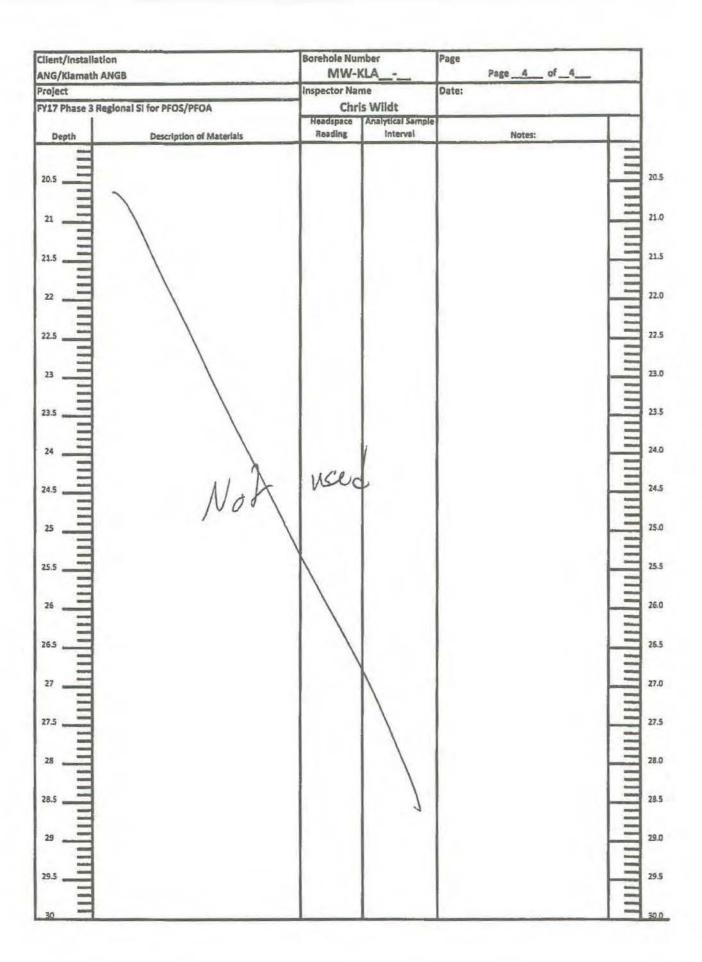


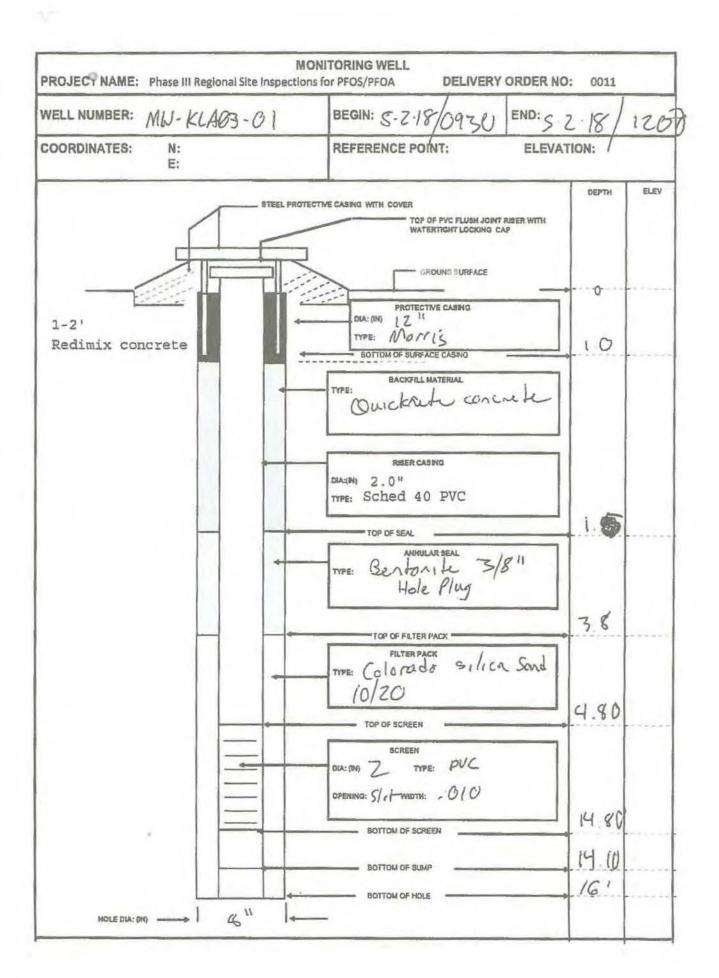
Client/Installation ANG/Klamath Al	IGB	Oversight Contractor Leidos			Borehole Number MW-KLA03-01
Project			ade Stra		Page
FY17 Phase 3 Regional SI for PFOS/P		A!	NG/Klamath	The second second	Page 1 of 4_
Sizes and Type of Drilling and Sample T822 Geograph T822 Hollowsh	ing Equipment				of New fix station
Date/Time Started : S Z /8 0930			Date/Time	Finished:	1200
Overburden Thickness		Depth to Groundwater		Total Dep	eh 6 '
Sample for PFOS/PFOA Analysis					
Sample ID: MW-KLA <u>B-U</u> 0	1				.0
Inspector Name Chris V	The second second			mw	MC
Monitoring Well ID: ANU - KLAO3 -0 (	Backfill Typ Bea	Forite	, 7	Date Back	filled: 2.18
Latitude	Longitude			(ft)	
Notes:		,			
Sketch:					
construction					tarmore
aned					
		<b>@</b> /	ner		
DN	-	-	_	-	

Client/Installation	ANG/Klamath ANGB	Borehole Number MW-KLA03 - U		Page 2 of 4	
Project FY17 Phase 3 Regi	onal SI for PFOS/PFOA	Annual Section 1	s Wildt	S . 2 · 18	
Depth	Description of Materials	Headspace Reading	Analytical Sampli Interval	Notes:	
	SAA	00			
4.5	SAND, SM, wet, med. Juse				

\* SAA = same as above

Client/Installation ANG/Klamath ANGB		Borehole Number MW-KLA <u>03-01</u>		Page 3 of 4		
Project FY17 Phase 3 Re	egional SI for PFOS/PFOA	Chris Wildt Headspace Analytical Sample		S 2 · 18		
Depth	Description of Materials	Reading	Analytical Samp Interval	Notes:		
10.5	SHND, SM, sat dense santed, and dense santed, and	0-3		Heaving Sonds		





Client/installation ANG/Klamath	ANGB	Oversight Contractor Leidos		Borehole Number KLA 63-SB Z				
Project	VIII S GO SIII DAN SI	Driller : Cascad	le	Page				
Y17 Phase 3 Regional SI for PFOS	/PFOA	ANG	/Klamath ANGB	Page 1 of 2_				
Geophe T			Boreho	NU . F MW 1				
S 2.18 12	10		S Z-18					
Overburden Thickness Z	Depth to 0	Froundwater	Total D	10				
Sample for PFOS/PFOA Analysis			sample for PFOS/PFO	A Analysis				
Sample ID: KLA <u>©</u> -SB <u>Z</u> 0:	1		Sample ID: KLA					
Sample Interval: 0 to 2 ft			Sample Interval	155 to 6.5 ft				
nspector Name Chris	Wildt		nspector Signature	111				
Monitoring Well ID:	Backfill Ty	ntrite	() Gate Ba	ickfilled: 2-18				
atitude	Longitude		Elevation (ft)					
Notes:								
5ketch:		T		TTT				
		1						
		-						
		-						

Client/Install	ation ANG/Klamath ANGB	Borehole Nur	nber 03-SB_Z	Page 2 of 2 Date: S. Z. (8'	
Project FY17 Phase 3	Regional SI for PFOS/PFOA	Inspector Nar Chri	ne s Wildt		
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:	
1 15 11 2	Brown silly SAND, SM, Ly, loose	0.5 1801		(KLAC3-5BZ-01	
3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Brown silty SAND SM, damp, ned	0.7			
5	104R 3/6, burk yellowst brown silty SAND, SM w/ 20% grand, wit gravel lease	0.5	1/1/11	KLA03- SBZ-07 C 1220	
7.5	10YR4/6 dark yellan Brown SAND, SW, saturated, med. Luse	rh.			

AR PID malfunction, cleaned + recalibrated

### SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAO7 -SBZ SAMPLING POINT: SAMPLE LOCATION: Soil SAMPLE MEDIA: SAMPLE TYPE Grab SAC - TestAmerica Sacramento LOGBOOK NUMBER: READING UNITS Sample Data Sample No. 1 FIELD CW to KLAC3 -SB 2-01 PID SAMPLE ID NUMBER: ppm 1215 SAMPLE DEPTH: 0-21 Date/Time: NO. CONTAINERS & PRESERVATION TYPE COLLECTION CONTAINER LABORATORY VOLUME **ANALYSIS** CODE\*\* TYPE (TYPE/VOL) PFOS/PFOA cold, no preservative SAC 1-402 plastic READING UNITS Sample Data Sample No. 2 FIELD KLAC3 -SB 2-02 0.5 PID SAMPLE ID NUMBER: ppm 1220 5.5-6.5 5.2.18 SAMPLE DEPTH: Date/Time: NO. CONTAINERS & PRESERVATION TYPE COLLECTION CONTAINER CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY 1-402 plastic PFO5/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" Insufficient volume; "NR" not required; define other code as appropriate Very high PID both - PID malfurcherin COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

\* AP pulle chapter Fixed

Client/Installation ANG/Klamati	h ANGB	Oversight Contro			Borehole Number KLAOL -SBZ	
Project		Driller : Gas	cade Stock	tus	Page	
FY17 Phase 3 Regional SI for PF	THE RESERVE TO SERVE THE PROPERTY OF THE PROPE	A	NG/Klamath A	the same of the sa	Page _1 _ of _2	
Sizes and Type of Drilling and S Geoprobe 18				The party of the state of the party of the state of the s	cation Description  GF Noad	
S-2-18 13/0			Date/Time I	18		
Overburden Thickness		roundwater		Total Depth		
Sample for PFOS/PFOA Analysis	3		Sample for I	PFOS/PFOA An	alysis	
Sample ID: KLA <u>P(</u> -SB2	01			D: KLA <u>01</u> -S	The state of the s	
Sample Interval: 0 to 2	ft		Sample I	nterval: 🕞	_to <del>7_</del> ft	
Inspector Name Chr	is Wildt		Inspector Si	gnature /		
Monitoring Well ID:	Backfill Typ Ber	inite	0	Date Backfill	ed: 2.18	
Latitude	Longitude			Elevation (ft)		
Notes: Sketch:		1 /	Г	T		
			-			
Throat			1.000	Lind		
		-	ande	[w.]		
./						
MAI	0 592					
TIV						

lent/Installa	tion ANG/Klamath ANGB	Borehole Nur	1-SBZ	Page Page 2 of 2 Date: 5 - 2 - 18	
roject /17 Phase 3 F	Regional SI for PFOS/PFOA	Inspector Na Chr	me is Wildt		
Depth	Description of Materials	Headspace Reading	Analytical Sampl Interval		
	grass	-			
1 =	10404/4 Oak, yellow,	0.7		CLAO1-SBZ-C1 @ 1315	
, III	brown silty SANK SM, dry, loose		1/		
, <u> </u>					
4	brown 5.1ky Sand SM, damp, ned.				
5	SM, damp, red.				
5.5				-	
5.5	164R3/4 dark	0.9		KLA01-SB2-02	
<sup>7</sup> =	rellowish brown		1///	1320	
.5	SAMO SW saturaled, red				
5 =	duse				
	SAA				
5 =					11111

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOI -SBZ SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab SAC - TestAmerica Sacramento LOGBOOK NUMBER: Sample No. 1 FIELD READING UNITS Sample Data 6.7 KLAC | -582-01 SAMPLE ID NUMBER: PID ppm 315 SAMPLE DEPTH: Date/Time: 5 2 . 18 0-2' NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION LABORATORY CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) cold, no preservative PFOS/PFOA SAC 1-40z plastic FIELD READING UNITS Sample Data Sample No. 2 KLAO | -SB Z -02 0.9 PID SAMPLE ID NUMBER: ppm 5.2.18 320 SAMPLE DEPTH: 6-7 Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION LABORATORY CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) 1-40z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY

DATE/TIME

RECEIVED BY:

COMPANY

DATE/TIME

RECEIVED BY:

COMPANY

Client/Installation ANG/Klamat	h ANGB	Oversight Co	entractor Leidos		Borehole Number KLAO/-SB_	
Project	***************************************	Driller : Case	: Cascade Stratus		Page	
FY17 Phase 3 Regional SI for PF	OS/PFOA	Al	NG/Klamath /	ANGB	Page _1 of _2	
Sizes and Type of Drilling and S				Borehole Lo	N of thoat	
Date/Time Started: 5 2 · 18 13	SO		Date/Time	15	5.2 18	
Overburden Thickness	Depth to G	roundwater . S		Total Depti	101	
Sample for PFOS/PFOA Analysi	s		Sample for I	PFOS/PFOA A	nalysis	
Sample ID: KLACI-SB	01		Sample I	D: KLAGI-	SB_02	
Sample Interval: 0 to 2	ft		Sample I	nterval: S	to/6 ft	
Inspector Name Chi	ris Wildt		Inspector/5		W	
Monitoring Well ID :	Backfill Typ	endon L		Date Backfi	lled: - Z. 18	
Latitude	Longitude			Elevation (f	t)	
Notes:						
Sketch:		T		T	TTTT	
		1				
		_	-	-		
	_			-		
		-	-	-		
		+				

lient/Installation ANG/Klamath ANGB			57-SB_1	Page 2 of 2_	
roject Y17 Phase 3 Re	egional SI for PFOS/PFOA	Inspector Na Chr	me is Wildt	Date: 5 2.18	
Depth	Description of Materials	Headspace Reading	Analytical Samp Interval	Notes:	
3 35 4	OVRS/4 Vellowish by SAND, SW, Lry, loose brown silty SAN SM, damp, med. dusing			KLA01-SB1-07 C1410	

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAO1-SB SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento FIELD READING UNITS Sample Data Sample No. 1 KLAC( -SB ] -01 SAMPLE ID NUMBER: PID SAMPLE DEPTH: 0-2 Date/Time: 5 Z · /8 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME CODE\*\* TYPE **ANALYSIS** (TYPE/VOL) LABORATORY PFOS/PFOA 1-40Z plastic cold, no preservative SAC READING UNITS Sample Data Sample No. 2 FIELD KLA 0 / -SB / -02 SAMPLE ID NUMBER: 0-1 PID ppm SAMPLE DEPTH: 52.18 1410 Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY CODE \*\* 1-4oz plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/installation ANG/Klamath ANG	GB .	Oversight Cont			Borehole Number KLAOL-SB_3
Project		Driller : Cas	cade		Page
FY17 Phase 3 Regional SI for PFOS/PFO	)A	A	NG/Klamath A	-	Page 1 of 2_
Sizes and Type of Drilling and Samplin					Cocation Description  Frequirity
Date/Time Started: 1420 · S·2·18			S-2	inished:	1440
Overburden Thickness	Depth to Gr	oundwater 7		_	101
Sample for PFOS/PFOA Analysis			Sample for P		
Sample ID: KLACI-SB301			Sample II	10000	(Sect) 10
Sample Interval: 0 to 2 ft					tg ft
Inspector Name Chris Wi			Inspector Sig	1/1/4	WIF
Monitoring Well ID:	Backfill Type	ton to	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	-	filled: S 2 18
Latitude	Longitude			Elevation	(ft)
Notes:					
Sketch:					
	14		66 .	07	
700	المور		05	B3	
Y Sa					
MAI					
VIV					

ANG/Klamath ANGB		Borehole Number KLACI -SB3		Page 2 of 2	
roject Y17 Phase 3	Regional SI for PFOS/PFOA	Inspector Na Chr	me is Wildt	5. Z 18	
Depth	Description of Materials	Headspace Reading	Analytical Sampl Interval		
0.5	brown silty SAMB	0.7		KLACI-SB3-01 -	
2.5	SM, dy, loon				
4.5 ————————————————————————————————————	10 YR 5/6 vellouish brown silty SAND SM, wet, med. derse	0.8		KLA01-583-02 C 1430	
9   9.5					

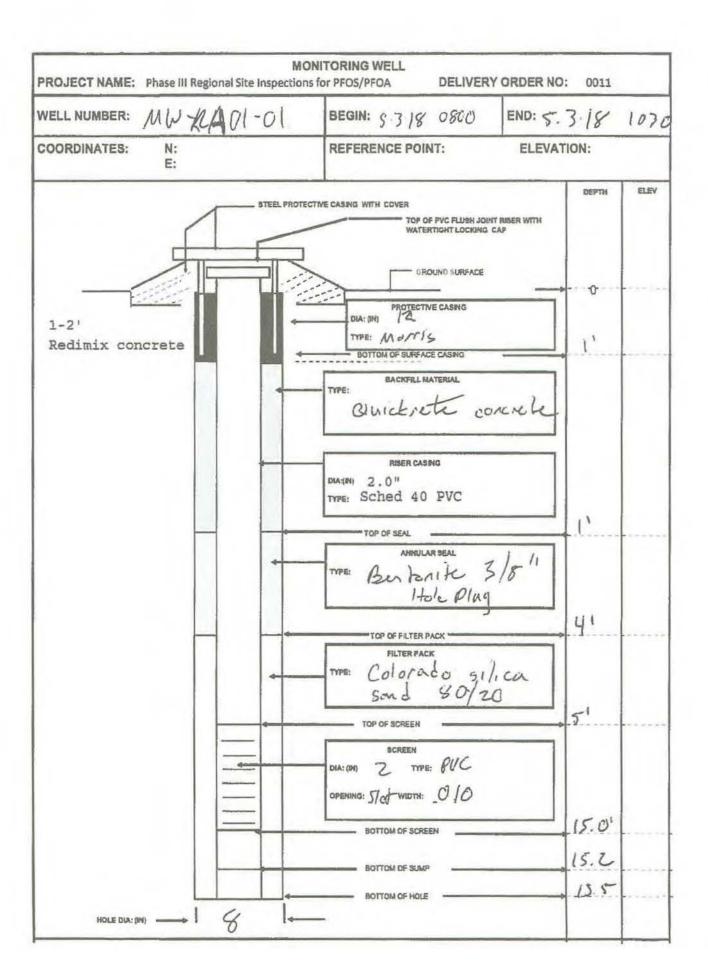
SAA: sam us obour

### SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOI -SB3 SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample No. 1 READING UNITS Sample Data FIELD 07 SAMPLE ID NUMBER: KLA 01 -SB3 -01 PID ppm 2.18 SAMPLE DEPTH: 0-2' Date/Time: 5 1475 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE CODE\*\* ANALYSIS LABORATORY (TYPE/VOL) 1-40z plastic PFOS/PFOA cold, no preservative SAC Sample Data Sample No. 2 READING UNITS FIELD 08 KLAC1-SB3-02 SAMPLE ID NUMBER: PID ppm 5 2.18 5.5-65 SAMPLE DEPTH: Date/Time: 14130 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE **ANALYSIS** LABORATORY CODE\*\* (TYPE/VOL) 1-4oz plastic PFOS/PFOA cold, no preservative 5AC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation ANG/Klam	ath ANGB	Oversight Contra	etor Leidos	Borehole Number MW-KLA (1)
Project	ANG/Klamath ANGB  e 3 Regional SI for PFOS/PFOA  Type of Drilling and Sampling Equipment  7 8 2 2  Holldus  Started: 18 0800  en Thickness 21  PFOS/PFOA Analysis  ID: MW-KLQ/I-C/01  Name  Chris Wildt	Driller : Goscade	Stratus	Page
FY17 Phase 3 Regional SI for	PFOS/PFOA	ANG/K	Jamath ANGS	Page _ 1 _ of _ 4
Sizes and Type of Drilling an				tween take ways
Date/Time Started:	0800	Da	te/Time Finished:	. , .
Overburden Thickness	Depth t	o Groundwater	Total Dept	15.5
Sample for PFOS/PFOA Anal	ysls			
Sample ID: MW-KLA	<u>7/-0/</u> 01		1	/_//
SHART SALES OF THE	Name and Address of the Owner, where the Parket of the Owner, where the Parket of the Owner, where the Owner, which is the Owner, wh		pector Signature	0
Monitoring Well ID: MW-KLAOI -	-C1 Backfill	Bertonite	Date Back	
Latitude	Longitu	de	Elevation (	(ft)
Notes: refusal @	15', hear	ing sands	10.5 bi	igs sind
Sketch:				
		old tax	riway	
		8× 1/10	J1	
		New	taknway	

	Depth Description of Materials  G (95)		mber KLACI - OI	Page 2 of 4	
Project FY17 Phase 3 I	Regional SI for PFOS/PFOA	Inspector Na Chr Headspace	me is Wildt   Analytical Sample	Date: 5. 3. 18	
Depth	Description of Materials	Reading	Interval	Nates:	
0.5		0,0		Nates:	
7.5 8 8.5 9 9.5	dense				

Hent/Installation		Borehole Nur		Page		
THE RESERVE OF THE PARTY OF THE PARTY.	GB		LACI-CI	Page 3 of	4	
roject	and a second	Inspector Nam		Date: 5.3 18		
/17 Phase 3 Regi	ional SI for PFOS/PFOA		s Wildt			
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:		
0.5					L	
1.0						
	ula Romal	1		1		
1.5	100 E 4 1.2 0)100	0.0				
=	1010-11				日	
2.0	- NIVI SW,	رايت			=	
	SKINDING	T				
2.5	Landed, No					
	SAND, SW, swad a					
-		1			13.	
3.0		1				
=						
3.5						
4.0						
4.0						
=	Heaving Sands	_			13.	
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9.5					1=1	

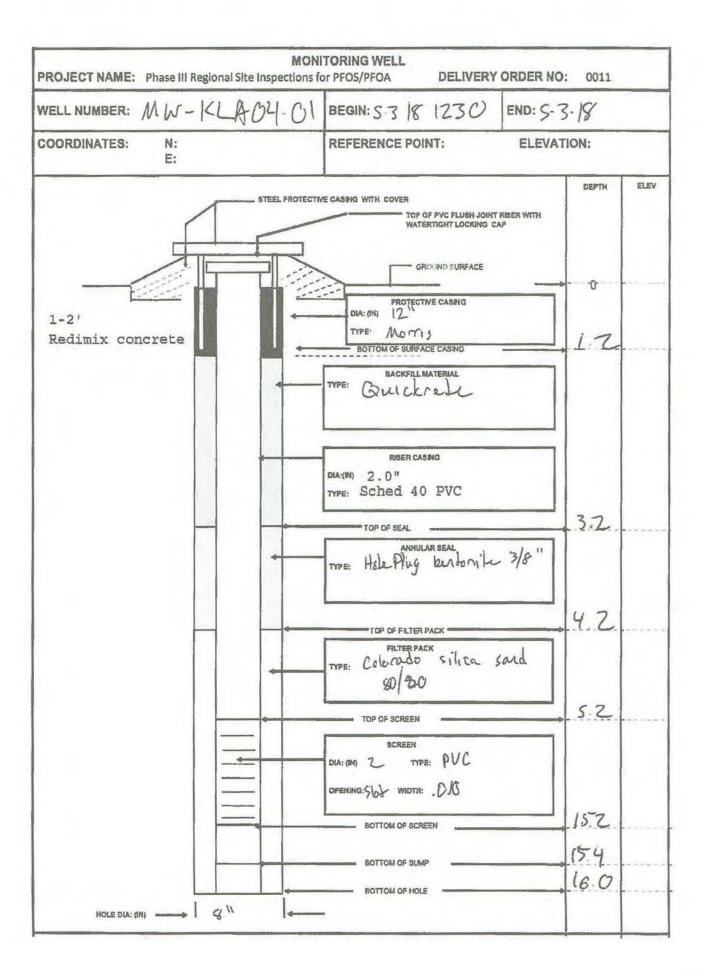


Client/Installation ANG/Klamath ANGB	Oversight Co	ntractor Leidos	Borehole Number MW-KLA	4-01
Project	Driller : Casca	ade	Page	
FY17 Phase 3 Regional SI for PFOS/PFOA	AN	G/Klamath ANGB	Page 1 of _	4
Sizes and Type of Drilling and Sampling Equipm			ocation Description	
Geoprobe 7822 1	tallowster	1 Beda	and Etakiwaj	u
Date/Time Started : 5-3 18 1230		Date/Time Finished:	1505	
1.	h to Groundwater	Total Dept	th	
Sample for PFOS/PFOA Analysis				
Sample ID: MW-KLA <u>04</u> - <u>01</u> 01		/	11	
Inspector Name Chris Wildt		Inspected Signature	H	
Monitoring Well ID:  MW-KLAOH-O	Butonite	Date Back	18 3 18	
	itude	Elevation (	ft)	
Moved west From organ	al locution,	located in low	w spot, 3 bigs	berbouter
1045				
COMP 0 9B				
	-			
A OSB				
			⊗ MW	
11				

Client/Installat	ANG/Klamath ANGB		(LA04-01	Page _ 2 _ of _ 4	
Project FY17 Phase 3 R	egional SI for PFOS/PFOA	Inspector Nar Chri	ne is Wildt	Date: 53-16	
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:	
0.5   1   1.5   2   2.5   3   3.5   4   4.5   5   5.5   6   6.5   7   7.5   8   8.5   9   9.5   10	Dark yellowsh brown 104R414 SIH SKND SM Damp i Damp i	0.3			

Client/installa ANG/Klamath		-	KLASH O	Page _ 3 _ of _ 4	
Project FY17 Phase 3 F	tegional SI for PFOS/PFOA		is Wildt	Date: 5.3.18	
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:	
10.5	10 YR3/6 dark yellowish brown SAND, SW, saturated, med. du  SAND, SW, saturated, med. du  SAND, SiJ, saturated, med. dus saturated, med. dus	0.0	midvar	BOE	
18.5					

llent/installa		Borehole Nu		Page		
NG/Klamath	ANGB	MW-		Page _4 of _4		
oject		Inspector Na		Date:		
/17 Phase 3 F	Regional SI for PFOS/PFOA		is Wildt			
1		Headspace	Analytical Sample			
Depth	Description of Materials	Reading	Interval	Notes:	+	
21 22 23 23.5 24 25 25 26 27 27.5 28 29 29 29 5 30		X				



Client/Instalia	tion ANG/Klamat	h ANGB		Oversight Co	Leidos		Borehole Number KLA 04-SB/
Project				Driller : Caso	ade		Page
Y17 Phase 3 R	tegional SI for PF	OS/PFOA		AN	IG/Klamath A	NGB	Page _1 _ of _2
	of Drilling and S			2		1	borehole
S. C/.	rted:	0830	)		Date/Time F	inished :	8 0845
Dverburden Ti Z <sup>I</sup> (	rickness	De	pth to Gro	oundwater		Total Dept	10'
iample for PFC	OS/PFOA Analysi	s			Sample for P		
Sample ID:	KLAC4-SB/	01			Sample ID		
Sample Int	erval: 0 to 2	ft			Sample In	terval:	4.5 to 5.5ft
Inspector Nam		is Wildt			inspector 5ig		. //
Monitoring We	ell ID :	Ba	Be1	to rive		Date Back	Riled: 4-18
Latitude			ngitude			Elevation (	ft)
Notes:							
Sketch:		T					
	Ja (						
			1				
				1 @ Z			
			/				
		1					
	1	23					

Client/Install	ation ANG/Klamath ANGB		24-SBO1	-	Page _ 2 _ of _	2
Project FY17 Phase 3	Regional SI for PFOS/PFOA	Inspector Na Chr	me is Wildt	Date:	1.18	
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval		Notes:	
1	104R4/3 Brown SILT ML dry, 100Se	1.4		KLA	904 CI- 0835	-01
3	104R4/2 dark grayich brown siThy SAND, SM saturated, mid. Just	1.1		KG	104 -01 08 4 C	-07

PROJECT NAME:	Kingsley Fig	eld ANGB	DELIVERY ORDI	ER 0011		
	Borehole D	ata	7			
SAMPLING PO	INT:	KLAOH -SBOI				
SAMPLE LOCA	TION:		1			
SAMPLE MEDI	A:	Soil				
SAMPLE TYPE		Grab				
LOGBOOK NUI	MBER:		SAC - TestAmerica	Sacrament	0	
Sample	e Data	Sample No. 1	FIELD	READING	UNITS	
SAMPLE ID NU	MBER:	KLAC4-SB 1-01	PID		pp	m
SAMPLE DEPT	H:	0-2'	Date/Time: S.	418	0879	Acres de la companya del la companya de la companya
O. CONTAINERS &	CONTAINER		PRESERVATION TYPE			COLLECT
VOLUME	TYPE	ANALYSIS	(TYPE/VOL)	LABORA	ATORY	CODE*
1-4oz	plastic	PFOS/PFOA	cold, no preservative	SA	С	
Samula	Data	Samula No. 2	FIELD	READING	UNITS	
Sample SAMPLE ID NU		Sample No. 2 KLAO 4-SB_1-02		READING		
SAMPLE DEPTI		4.5-5.5	PID Date/Time:	5.4.18		40
SAMPLE DEPT	7;	7.4 - 3.3	_ Date/Time:	3.4.12	08	90
IO. CONTAINERS & VOLUME	CONTAINER TYPE	ANALYSIS	PRESERVATION TYPE (TYPE/VOL)	LABORA	ATORY	COLLECTI CODE*
1-4oz	plastic	PFOS/PFOA	cold, no preservative	SA	С	
"X" analysis collecti OMMENTS:	ed; "IS" Insuffic	ient volume; "NR" not	required; define other code a	s appropriate	- X 11	
ELINQUISHED BY: hris Wildt		DATE/TIME	RELINQUISHED BY:		I	DATE/TIME
DMPANY Leidos			COMPANY			
ECEIVED BY:		DATE/TIME	RECEIVED BY:		T.	DATE/TIME
					1	

CONTRACTOR AND ADDRESS OF THE PARTY OF THE P	ent/Installation ANG/Klamath ANGB				Contractor Leldos		Barehole Number KLACY -SB 3		
Project				Driller : Gas	seade		Page		
FY17 Phase 3	Regional SI f	or PFOS/PFOA		1	NG/Klamath	ANGB	Page 1 of 2		
Sizes and Type		and Sampling 1				100000000000000000000000000000000000000	Solary of KLBC4		
Date/Time Sta	arted: 08	CC			Date/Time Finished:				
Overburden T	hickness		Depth to 0	7		Total Dept	h /01		
Sample for PF	OS/PFOA Ar	nalysis			Sample for	PFOS/PFOA	Analysis		
Sample ID:	KLACH-S	6B301			Sample I	D: KLACE	-SBZ_02		
Sample Int	terval: 0	to 2 ft			Sample I	nterval: S	5/ to 95 ft		
Inspector Nan	ne	Chris Wild	t		Inspector Si	In w	16		
Monitoring W	ell,ID:		Backfill Ty	sendano	le "	Date Back	filled: . 4.18		
Latitude /			Longitude			Elevation (	(ft)		
Notes:									
Sketch:	6	SBI							
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Client/Installation	n ANG/Klamath ANGB	-	K4583	Page _ Z _ of _ 2	
roject Y17 Phase 3 Reg	ional SI for PFOS/PFOA		s Wildt	Date: 5 · 4 · 18	
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:	
0.5	SILY/4 DK Yellowsh Soun Sildy SAND, SM dry, looce	1.8		1CLAC4-5B3-01	
3.5	OYR 5/3 Brown sandy SICT, SM, wet, mid. dense_	10		KCA04-583-02 Q 0810	

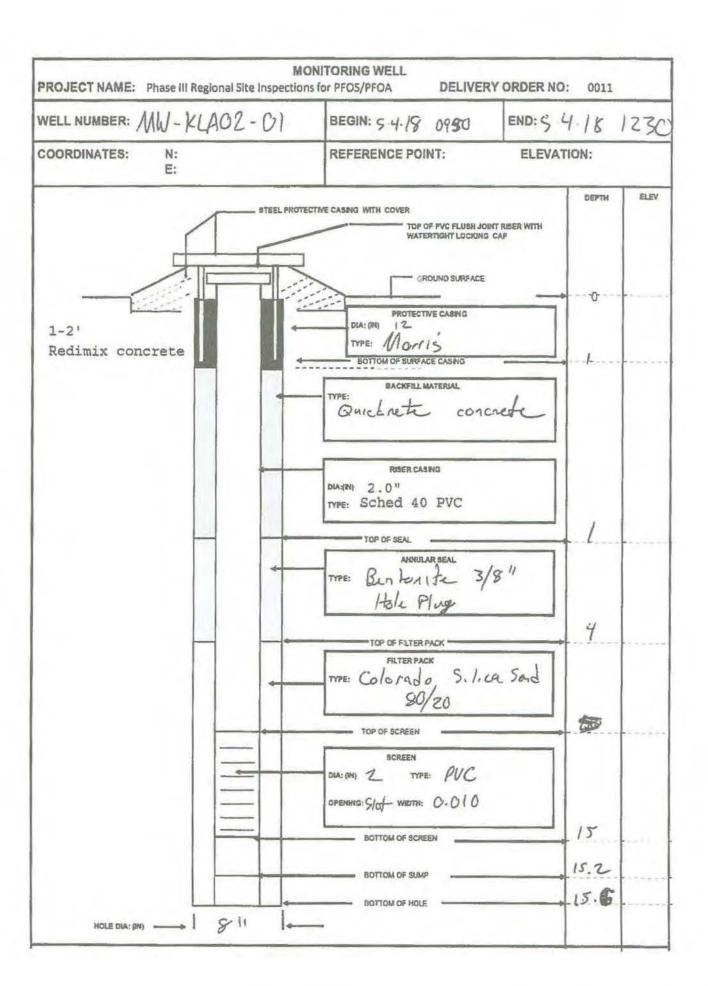
PROJECT NAME:	Kingsley Fi	eld ANGB	DELIVERY ORDE	R 0011	
	Borehole D	ata	7		
SAMPLING PO	INT:	KLACH -SB 3			
SAMPLE LOCA	TION:		1		
SAMPLE MEDI	A:	Soil			
SAMPLE TYPE		Grab			
LOGBOOK NU	MBER:	1	SAC - TestAmerica	Sacramento	
Sample	e Data	Sample No. 1	FIELD	READING UN	VITS
SAMPLE ID NU	MBER:	KLA04-SB3-01	PID	1.8	ppm
SAMPLE DEPT	H:	0-2'	Date/Time: 5.4	18 08	CS
IO. CONTAINERS &	CONTAINER	ANTALVEIC	PRESERVATION TYPE		COLLECTION
VOLUME 1-4oz	TYPE	ANALYSIS PFOS/PFOA	(TYPE/VOL)  cold, no preservative	LABORATO	RY CODE**
1-402	plastic	Frostron	Colo, no preservative	1 SAC	
Sample	e Data	Sample No. 2	FIELD	READING UN	VITS
SAMPLE ID NU		KLA 0€/-SB -02		1.0	ppm
SAMPLE DEPT		55-65	Date/Time:	The second secon	2810
IO. CONTAINERS & VOLUME	CONTAINER	ANALYSIS	PRESERVATION TYPE (TYPE/VOL)	LABORATO	COLLECTION CODE**
1-402	plastic	PFOS/PFOA	cold, no preservative	SAC	
"X" analysis collect	ed; "IS" insuffic	ient volume; "NR" not	required; define other code as	appropriate	
ELINQUISHED BY:		DATE/TIME	RELINQUISHED BY:		DATE/TIME
SADANIN I-I-			COMPANY		
DMPANY Leidos			RECEIVED BY:		DATE/TIME
OMPANY Leidos ECEIVED BY:			1		

Client/Installation ANG/Klamath Al	NGB	Oversight Contractor Leidos			Borehole Number  MW-KLACZ-01		
Project		Driller : 6a6	cade Sfran	tus	Page		
FY17 Phase 3 Regional SI for PFOS/F	FOA	A	NG/Klamath	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	Page 1 of 4_		
Sizes and Type of Drilling and Samp Geoprale 7822	Hollowsk	em a	ngv		conur of PRCOZ		
S.4 18 0950			Date/Time S 4	18			
Overburden Thickness	Depth to Gr	oundwater 7		Total Depth	\$ 6		
Sample for PFOS/PFOA Analysis							
Sample ID: MW-KLA <u>OZ-01</u> (	01			,			
Inspector Name Chris V	Vildt		Inspector Si	gnature 1	A		
Monitoring Well ID:		1		Date Backfill	ed:		
MW-KLAOZ-01	Backfill Type Gent	inte		5.4	4 18		
Latitude	Longitude			Elevation (ft)			
Notes: 10.5 bags so	nd, 2	begs	kerbon	h, 1.	5 cenert		
Sketch:							
19.				1.1			
			Port				
	MW						
	-						
1	COCAN	6					

Client/Installati	on ANG/Klamath ANGB	-	LADZ UI	Page _ 2 _ of _ 4	
roject Y17 Phase 3 Re	gional SI for PFOS/PFOA		Wildt	Date: S-418	
Depth	Description of Materials	Reading Reading	Analytical Samp Interval	Notes:	_
0.5	Sondy SILT SM, dry, loose	0.0			
4	SAA, damp	0-1			

SAA: same is above

Client/Installation	NGB MW-KLACZ- CI			Page 3 of 4		
Project FY17 Phase 3 Regional SI for PFOS/PFOA		Inspector Nam Chris	wildt	Date: 5, 4.18		
Depth	Description of Materials	A CONTRACTOR OF THE PARTY OF TH	Analytical Sample Interval			
11.0						
3.0	10 1 R 4/2 dark 10 rayish brown clayey saturated	0.3				
5.5	med BOE					
17.0						
8.0						
9.0						
20.0						



ANG/Klamath ANGB		Oversight Co	entractor Leidos	Bore	hole Number KLA	-SB_Z_
Project		Driller : Cast	Driller : Cascade		Page	
FY17 Phase 3 Regional SI for PFOS/PFOA		Al	NG/Klamath ANG	В	Page 1	_ of2
Coprebe			В	midd/	Description & born	ing
S 4-18 08	15		Date/Time Finis			
Overburden Thickness	Depth to 6	G (	To	otal Depth		
ample for PFOS/PFOA Analys	is		Sample for PFOS	S/PFOA Analysis		
Sample ID: KLA <u>0</u> 4SBZ	01			KLACESBZ		
Sample Interval: 0 to 2	ft ft	III.	Sample Inte	rval: 4.5 to	5.5 ft	
nspector Name Ch	ris Wildt	Zimie:	Inspector Signat	ture, [ IAL		
Monitoring Well ID :	Backfill Ty Beno	bute	Date Backfilled: 5.4.18			
atitude	Longitude		Elevation (ft)			
Sketch:	1					-
					+	+
		02				
	_/_	-				_
	107	}			-	-

lient/installatio	ANG/Klamath ANGB		KLAUY-SBZ		ge _ 2 _ of _ 2_	
roject Y17 Phase 3 Rej	gional SI for PFOS/PFOA	-	ls Wildt	Date: S . 4	.18	
Depth	Description of Materials	Reading	Analytical Sample Interval	9	Notes:	
1.5	SILT, ML dry, med, dense	01	1/1	KLA04	· 582· 0	3/
3 3 3 3 3 3 5 3 5						
45	MID 4/3 Brown					
55	sandy SILT, SM wet, and duce	C.7	1/1		- 987 -0; 0875	2
65						
7.5 8 8.5 9 9.5						
8.5						
9.5						

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLA04-SBZ SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento FIELD READING UNITS Sample Data Sample No. 1 KLA 04-SB 2-01 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-21 Date/Time: 5.4-18 0520 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY CODE\*\* 1-40z PFOS/PFOA plastic cold, no preservative SAC Sample Data Sample No. 2 FIELD READING UNITS KLA04-SB2-02 SAMPLE ID NUMBER: PID ppm 5.4-18 0825 4.5-55 SAMPLE DEPTH: Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION CODE\*\* VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY 1-402 PFOS/PFOA cold, no preservative SAC plastic \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME DATE/TIME RELINQUISHED BY: Chris Wildt COMPANY COMPANY Leidos RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation		Oversight C			Borehole N		
ANG/Klamath ANGB		-	Leidos			LACL-SB_	
Project FY17 Phase 3 Regional SI for PFOS/PFOA		Driller : Gos	NG/Klamath	LIMS ANGR	Page	n 1 of 2	
Sizes and Type of Drilling and Sa		A	NG/Kiamath		Location Descrip	ge_1_ of_2_	
Geoprobe 7	812					Boring	
Date/Time Started:	335		Date/Time 5-4	Finished:	13	50	
Overburden Thickness	Depth to 0	G l		Total Dep	81		
Sample for PFOS/PFOA Analysis			the same named in column 2 is not	PFOS/PFOA	The second second		
Sample ID: KLACZ_SB_1	01			D: KLA			
Sample Interval: 0 to 2	ft				4.5 No 55	ft	
Inspector Name Chr	s Wildt		Inspector \$	ignature	M		
Monitoring Well ID:	Backfill Ty	pe tente	U	Date Back	filled:		
Latkude	Longitude		Elevation (ft)				
Notes:		1			_		
Jacob	- 1						
		8	SBI				
		1					
					N N	32	
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		05	65				

Client/Installation ANG/Klamath ANGB Project FY17 Phase 3 Regional SI for PFOS/PFOA			2SB_	Page _ 2 _ of _ 2
		-	is Wildt	Date: 5-4-18
Depth	Description of Materials	Headspace Reading	Analytical Sampl Interval	Notes:
1.5	10 YRS/2 grayish brown SAND, SW Lry, loose	4.0		1540 = 1340
3 4 4 4.5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	SAA, Jamp	0,4	T//h	C 1345
7.5	BOUE			

SAA: same as above

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLACZ -SB 1 SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento READING UNITS Sample Data Sample No. 1 FIELD KLAGZ-SB /-01 4.0 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-2" Date/Time: 5-4-18 1340 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY CODE\*\* 1-40z plastic PFOS/PFOA cold, no preservative SAC Sample Data Sample No. 2 FIELD READING UNITS KLA 02-SB 1-02 04 SAMPLE ID NUMBER: PID ppm 4.5-55 SAMPLE DEPTH: Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION LABORATORY CODE\*\* VOLUME TYPE ANALYSIS (TYPE/VOL) 1-40z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: DATE/TIME RELINQUISHED BY: DATE/TIME RELINQUISHED BY: Chris Wildt COMPANY COMPANY Leidos RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation ANG/Klamath	ANGB	Oversight Contractor  Leidos  Driller: Geseade.			Borehole Number KLAC2-SB Z		
Project					Page		
FY17 Phase 3 Regional SI for PFOS	17 Phase 3 Regional St for PFOS/PFOA		ANG/Klamath A	NGB	Page _1 _ of _2		
G co probe	Action to the second se				Eastern Buring		
S.LI.	310		Date/Time I	Finished:	1330		
Overburden Thickness	Depth to Gro	oundwater			.51		
Sample for PFOS/PFOA Analysis				PFOS/PFOA An	CAROLINA CONTRACTOR OF THE CON		
Sample ID: KLACLSB 10:	1		The second second second	D: KLAOL-S			
Sample Interval: 0 to 2 ft			Sample II	nterval: 3.5	5 tg/4.5 ft		
Inspector Name Chris	Wildt		Inspector Sig	gnatura /	N		
Monitoring Well ID:	Backfill Type	tonite	,	Vate Backfilled: S-4 18			
Latitude	Longitude		Elevation (ft)				
Notes:							
Sketch:							
	Ø	561					
				er 50 Z			
		.07					
11/	8	\$83					

ANG/Klamath ANGB		Inspector Name		ANGB KLAGE-SB 2 Inspector Name		Page 2 of 2	
17 Phase 3 R	egional SI for PFOS/PFOA	Chr	is Wildt Analytical Sampl	Date: 5.4.18			
Depth	Description of Materials	Reading	interval	Notes:	_		
1.5	10YRS/2 Brown SAND, SW dry, loose	2.3		KLA0Z-SBZ-01 (0 1320)			
3.5	104R4/4 Brown silty SAND SA damp, med Lusse	4.7		KLA07-582-02 C1375			

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data SAMPLING POINT: KLA 0Z-SB Z SAMPLE LOCATION: SAMPLE MEDIA: Soll SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample Data Sample No. 1 FIELD READING UNITS SAMPLE ID NUMBER: KLA 02-SB Z-01 PID SAMPLE DEPTH: Date/Time: 54.18 1320 0-2 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS LABORATORY CODE\*\* (TYPE/VOL) 1-40z PFO5/PFOA plastic cold, no preservative SAC Sample Data Sample No. 2 FIELD READING UNITS KLA02-5B2-02 4.7 SAMPLE ID NUMBER: PID ppm 3.5-4.5 SAMPLE DEPTH: Date/Time: 5.4.18 1325 COLLECTION NO. CONTAINERS & CONTAINER PRESERVATION TYPE VOLUME LABORATORY CODE\*\* TYPE ANALYSIS (TYPE/VOL) 1-40z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Cilent/installation		Oversight Co			Borehola Number
ANG/Klamath	ANGB		Leidos		KLACZ-SB3
Project		Driller : Case	cade		Page
FY17 Phase 3 Regional SI for PFOS/PFOA			NG/Klamath	The state of the law o	Page _ 1 _ of _ 2
Sizes and Type of Drilling and Sa					Souther Boring
Date/Time Started:	55		Date/Tim	4. 18	140
Overburden Thickness	Depth to	Groundwater 5.5		Total Depth	1
Sample for PFOS/PFOA Analysis			Sample fo	r PFOS/PFOA Ar	nalysis
Sample ID: KLAC2_SB3	01		Sample	ID: KLAOZ	68 <u>3</u> 02 _
Sample Interval: 0 to 2	ft		Sample	Interval: 4	tg5_ft
Inspector Name	s Wildt		THE RESERVE THE PARTY NAMED IN	Signature (	4
Monitoring Well ID:	Backfill Ty	in tonit	e	Date Backfil	led: 3 4-18
Latitude	Longitude			Elevation (ft	1
Notes:					
Sketch:		T		T	
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4	6	3 563			
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Client/Installa	ANG/Klamath ANGB	Borehole Nu KLA Inspector Na	02-SB3	Page 2 of 2 Date:
	Regional SI for PFOS/PFOA	Chris Wildt		5.418
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:
1 1.5 2 2.5	104R S (Z grayish brown SAND, SW Lry, 1002	1.2	1/1/2	CLAOZ-SB3 01
3.5	10YR3/4 Dork yellowish brown SIHY SAND, SM damp, med. derse	09	Mh	KCA02-583-02 Q 1400
6.5 ————————————————————————————————————	104/2 S/2 grapash brewn S/RWD, SW saturaded, and danse			

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOZ -SB3 SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample Data Sample No. 1 FIELD READING UNITS KLA 02-583-01 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-2 54.18 1355 Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME LABORATORY TYPE **ANALYSIS** (TYPE/VOL) CODE\*\* 1-4oz plastic PFOS/PFOA cold, no preservative SAC Sample Data Sample No. 2 FIELD READING UNITS KLACZ -SB 3-02 0.9 SAMPLE ID NUMBER: PID ppm 54.18 1400 SAMPLE DEPTH: 4-51 Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY CODE\*\* 1-40z plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation ANG/Klamath ANGB		Oversight Co	ntractor Leidos	Borehole Number KLA05-SB			
Project	Driller : Gaso	ado strabus	Page				
FY17 Phase 3 Regional SI for PFOS/	AR	IG/Klamath ANGB	Page _ 1 _ of _ 2				
Geograph 782			Boreh	W Benny			
Date/Time Started:	20		Date/Time Finished	0950			
Overburden Thickness Z		G. S		7. 5			
Sample for PFOS/PFOA Analysis		Sample for PFOS/PFOA Analysis					
Sample ID: KLA <u>85</u> -SB <u></u> 01			Sample ID: KLA05-SB_102				
Sample Interval: 0 to 2 ft		Sample Interval: S No 6 ft					
Inspector Name Chris		Inspector Signature					
Monitoring Well ID :	Backfill Ty	perfoni-	Date I	Sackfilled: 5.5.18			
Latitude	Longitude		Elevat	ion (ft)			
Notes: compact s	eils ci	rushing	sample	tubes			
Sketch:	T	1					
		01					
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	4	8 3					
		1					

Client/Installatio	ANG/Klameth ANGB		<u>s-sbz</u>	Page _ 2 _ of _ 2 Date:	
Project Y17 Phase 3 Reg	pional SI for PFOS/PFOA	Inspector Na Chr	ne is Wildt		
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Nates:	
0.5	104R4/2 Park grayish brown silty 5HNO SM, dry, loose	0.5		KLAOS-SB7-01 @ 0930	
4 4.5 5 5.5 6 6.5 7 7.5 8 8 8 8 5 9 9 9 9 9 9 9 9 9 9 9 9 9 9	10VR 4/4, dark yellowish brown silty SAND SM, saturded, med. duse	2.1	May	KLA05-SBZ-02 C 0940	

# SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOS -SB -SAMPLING POINT: SAMPLE LOCATION: SAMPLE MEDIA: Soil SAMPLE TYPE Grab LOGBOOK NUMBER: SAC - TestAmerica Sacramento Sample Data Sample No. 1 FIELD READING UNITS KLACS -SB\_2-01 0.5 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 0-2 Date/Time: 5.5.18 0930 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS LABORATORY CODE\*\* (TYPE/VOL) 1-402 plastic PFOS/PFOA cold, no preservative SAC Sample Data Sample No. 2 FIELD READING UNITS KLA C5 -SB Z-02 211 SAMPLE ID NUMBER: PID ppm 5.5.18 5-6 0940 SAMPLE DEPTH: Date/Time: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION CODE\*\* VOLUME TYPE LABORATORY ANALYSIS (TYPE/VOL) 1-4oz plastic PFOS/PFOA cold, no preservative SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY COMPANY Leidos RECEIVED BY: DATE/TIME RECEIVED BY: DATE/TIME COMPANY COMPANY

Client/Installation ANG/Klamath ANGB		В	Oversight Contractor Leidos			Borehole Number KLA05-SB 3			
Project			Driller: Gasende Structus		stys	Page			
FY17 Phase 3 Regional SI for PFOS/PFOA			A	NG/Klamath A	Topic and the latest	Page _ 1 _ of _ 2			
	pe of Drilling an						Bolly		
S-S (		000			Date/Time I	Finished:	1030		
Overburden Thickness Depth to 6				oundwater Total De			854		
Sample for PFOS/PFOA Analysis					Sample for I	PFOS/PFOA	Analysis		
Sample II	D: KLAUSSB	301				D: KLA OS	The state of the s		
Sample Interval: 0 to 2 ft					NAME AND ADDRESS OF THE OWNER, WHEN	THE RESERVE OF THE PERSON NAMED IN	S to G S ft		
Inspector Name Chris Wildt					Inspector Signature				
Monitoring Well ID: Backfill Typ			Backfill Type	ntonite	_	Date Back	filled:		
			Longitude			Elevation (	(ft)		
Notes:									
Sketch:	П		T	T		T	TTT		
				B-1					
	28								
		1							
				Ø/3					

lient/installatio	ANG/Klamath ANGB	Borehole Nu	<u>25-58</u>	Page _ 2 _ of _ 2	
roject Y17 Phase 3 Rep	gional SI for PFOS/PFOA	Inspector Na Chr	me is Wildt	Date: S · S · /8	
Depth	Description of Materials	Headspace Reading	Analytical Samp Interval	Notes:	
1.5	10 VR4/3 Brown solty SAND SM, Ly, loose	1.0		, KCAOS · SB3 · OI	
3.5 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	104RS/3 Brown Silty SANO SM, daup, radius duse	0.4		KLA-563-02 C 1020	

Client/Installation ANG/Klarr	nath ANGB		Oversight Co	ntractor Leidos		Borehole Number KLACS -SB /		
Project			Driller : Gess	ada sta	his	Page		
FY17 Phase 3 Regional SI fo	PFOS/PFOA		AN	G/Klamath	ANGB	Page 1 of 2_		
Sizes and Type of Drilling as	nd Sampling E 787	quipment			Borehole	N Song		
Date/Time Started:	840			Date/Time	Finisped:	0910		
Overburden Thickness		Depth to Gro	oundwater D		Total Dep	7.5		
Sample for PFOS/PFOA Ana					PFO5/PFOA			
Sample ID: KLA <u>05</u> -SI						SSB 1 02		
Sample Interval: 0 to	o 2 ft			Sample I	nterval:	S No G ft		
Inspector Name	Chris Wild	-	444	Inspector	Ignature W	UT		
Monitoring Well ID :		Backfill Type	Forite Date Bar			Selfed 18		
Latitude		Longitude	Elevation			(ft)		
Notes:								
Sketch:					T			
			10	į				
	2				-			
	6							
1								
MA			87		-			

Client/Instalia	ANG/Klamath ANGB	Borehole Nur KLA	∑-SB_	Page of2		
	Regional SI for PFOS/PFOA	Chr		Date: 5.5. 18		
Depth	Description of Materials	Headspace Reading	Analytical Sample Interval	Notes:		
1 11 11 11 11 11 11 11 11 11 11 11 11 1	10XR4/3 Brown silty SAND, SM	0.7	Mh	KLA05-SBI-01 @ 0900		
2.5	101R5/3 Brown SANO, SW well graded, damp loose	1,5		KCAOS_SB1-07 E 0910		

#### SAMPLE COLLECTION/CHAIN-OF-CUSTODY RECORD PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Borehole Data KLAOS -SB SAMPLING POINT: SAMPLE LOCATION: Soil SAMPLE MEDIA: SAMPLE TYPE Grab LOGBOOK NUMBER: 1 SAC - TestAmerica Sacramento READING UNITS Sample Data Sample No. 1 FIELD KLA05-SB 1-01 PID SAMPLE ID NUMBER: ppm SAMPLE DEPTH: 0-2" Date/Time: S S 18 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE ANALYSIS (TYPE/VOL) LABORATORY CODE\*\* PFOS/PFOA cold, no preservative 1-40z plastic SAC READING UNITS Sample Data Sample No. 2 FIELD KLADS -SB 1 -02 1991.5 SAMPLE ID NUMBER: PID ppm SAMPLE DEPTH: 5-61 Date/Time: 5.5 18 0910 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME LABORATORY TYPE ANALYSIS CODE\*\* (TYPE/VOL) 1-4oz PFOS/PFOA cold, no preservative SAC plastic \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate COMMENTS: RELINQUISHED BY: DATE/TIME RELINQUISHED BY: DATE/TIME Chris Wildt COMPANY Leidos COMPANY RECEIVED BY: DATE/TIME RECEIVED BY:

COMPANY

COMPANY

DATE/TIME

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# APPENDIX B GROUNDWATER SAMPLING LOGS

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			G	ROUN	D WAT	<b>ER DEVELO</b>	PMENT	LOG		
								WELL ID:	MIN-	KLA02-01
PROJECT	NAME: Kir	ngsley Fiel	d ANGB						ORDER 001	
Date:	Volume Purged (liters)	PURGE RATE (A	ORP (mv)	TEMP (°C)	pH (s.u.)	SpecCondS/cm	DO (mg/L)	TURBIDITY (NTU)	DEPTH TO WATER (FT BTOC)	COMMENTS
1110	(		155	14.8	6.17	(.16	12.58		3.94	Wew hose on pray
1135	Sgal	Igpm	(53	14.3	9.38	2.73	12.67	, _	9.20	
1145	15	11	162	15.3	9.25	2.68	12.41	_	11.05	
1150	20	31	161	15.2	9.31	2.69	1701	_	DV	
1200	25		153	14.5	9.25		11.36		Dhy	
									/	
	\									
			/							
		1								
RECO	ORDED BY:	MA	(Signate	ure)		QA CHECKED BY	:		(Signati	ure)

### **GROUND WATER DEVELOPMENT LOG** WELL ID: MW-KLAOG-01 PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** PURGE **DEPTH TO** Volume Date: 5-5-18 Purged (tillers) RATE ORP DO TURBIDITY WATER pH (15026in) TEMP (°C) (mv) (s.u.) SpecCond \_\_S/cm (mg/L) (FT BTOC) TIME (NTU) COMMENTS S -377 gpm 8.76 8.90 1220 12.2 12.43 12.53 0.89 10 12.6 1275 -250 8.01 12:41 11 140 0.90 187 8.62 10-16 1230 12 11 17:15 Very Glow recharge 10.79 0.97 12.9 8.51 1245 6.5 -180 1330 RECORDED BY: QA CHECKED BY: (Signature) (Signature)

	4		C	ROLINI	) MAT	ER DEVELO	DMENI	LIOG		
				INCOM	JVVAI	LIVULVELO	I IVILIV		101.1-1	CLAD4-01
BBOIECT	NIANAE, Vim	aslav Fial	ANCD						ORDER 001	
	NAME: Kin		ANGB					DELIVERY		1
Date:	Volume Purged (liters)	PURGE RATE (mL/min)	ORP (mv)	TEMP (°C)	pH (s.u.)	SpecCondS/cm	DO (mg/L)	TURBIDITY (NTU)	DEPTH TO WATER (FT BTOC)	COMMENTS
1340	0.5	0.5	-7	14.2	10.3	1,0(	11.57	~	2.60	
1345	2.5	0.5	68	126	9.78	1-16	12.30	-30	4.34	
1350	5.0	0.5	34	12.3	9.74	1.27	11.83	-5.0	4.42	
1355	7.5	1.0	MY-43		9.76	1.34	10.07	-5.0	5.05	
1900	12.5	1.0	-15	12.1	9.46	1.37	5.45	-5.0	5.89	
1405	17.5	1.0	29	12.9	9.51	149	6.87	-S. 1	6.15	
1410	22.5	1.0	14	13. 0	9.51	1.36	4:72	- 5.0	6.80	
1415	27.5	(0)	-3	13.0	9.72	1.35	11.77	-50	6.95	
1420	32.5	1.0	37	12.2	9.59	1.37	12.35	-5.0	7.20	
1425	37.5	(.0	36	12.3	9.67	1.40	15.33	-5.0	7.50	
1430	42.5	1.0	-2	11.9	9.44	1.40	4.88	-5.0	8.05	
1435	47.5	1.0	12	11.9	9.51	1.40	7.29	- 5.0	8.15	
1440	52.5	1.0	14	11.8	9.50	1.40	7.06		8.35	
1490	57.5	1.0	-12	11.5	9.42	1.40	6.25	-5.0	8.89	
			1, 1	~		M-W				Ent pury dondo
RECO	ORDED BY:	1 1/2	101A			QA CHECKED BY	:			Shedulary
		111	(Signatu	ure)		emakers and American and Provide			(Signatu	rice)

	GROUND WATER DEVELOPMENT LOG									
								WELL ID:	Mhs-	KLA83-01
PROJECT I	NAME: Kir	ngsley Field	d ANGB					23	ORDER 001:	· · · · · · · · · · · · · · · · · · ·
Date: S-S-IS TIME	Volume Purged (liters)	PURGE RATE (mL/min)	ORP (mv)	TEMP (°C)	pH (s.u.)	SpecCond <u>M</u> S/cm	DO (mg/L)	TURBIDITY (NTU)	DEPTH TO WATER (FT BTOC)	COMMENTS
1600	0.5	1 gpm	-385	138	9.12	1.45	5.07	-50	7.60	
1005	S	Igpm	-340	12.4	8.85	1.19	7.82	-5.0	8.95	
1010	(0	įί.				-1.08		- A - P - P		
1620	20	UY	-203	12.3	8.68	1.08	10.80	~	9.50	
1025	25	L1	-185	12.9	8.98	1.07	12.90		9.95	
1530	30	13	-52	13.4	8.78	1.08	8 64		10.09	140
1635	35	IN.	- SI	13.3	8.80	1.07	***		10.20	
1640	40	ic	-140	12.5	8.55	1.08	3.92		1030	
1645	45	11	-135	12.1	8.61	1-09	3.85		10.35	
1650	50	- 1,	-140	12.9	8.71	1.10	3.81		10.41	
170C	60	l\	-5.5	14.0	8-87	- 1.08	17.14	1 2	10,41	
1705	65	ν(	-36	13.0	8.81	1.05	12.63	)	10.51	
1710	70	11	-40	13.1	8.82	1.10	12.61	-	10.60	
1715	75	11	- 41	13.0	8.79	1.01	12-60	-	16-65	
				M						
RECO	RECORDED BY:  OA CHECKED BY:  (Signature)  (Signature)								re)	

#### **GROUND WATER DEVELOPMENT LOG** WELLID: MW-KLAOI-OI PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** PURGE **DEPTH TO** Date: Volume 5.5.18 Purged RATE (min) WATER ORP DO TURBIDITY pH SpecCond MS/cm TEMP (°C) TIME (mv) (s.u.) (mg/L) (NTU) (FT BTOC) COMMENTS 6.01 0.5 8.89 SCYD 13.5 441 11.05 0 9.37 5.0 8.39 1.0 8.30 505 526 12.6 9.78 10,0 1.0 -4 8.16 6 74 -5.0 1510 11.35 8.03 9.80 1.0 1515 98 150 -5-0 12.36 -5 20.0 10.38 1.0 9.96 -50 12.5 1570 ~33 7.81 12.08 1515 25.0 19.4 11.59 7.80 -S.O 10,65 12.6 10 -16 10.80 1530 1-0 8.03 -6 -5.0 30.0 20.3 12.6 .0 1535 35.0 -14 680 12.6 20.8 6.81 6. 400 390 1540 1-80 7.78 20.1 6. 1545 -0 7.75 200 -13 20.3 2.01 550 20.4 90 00 12.4 2.50 94 12.5 -10 12.89 1555 7.73 20,3 RECORDED BY: QA CHECKED BY: (Signature) (Signature)

#### GROUND WATER LOW-FLOW PURGE LOG WELL ID: MWS 73-03-PRLOS PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Volume PURGE **DEPTH TO** Date: 3-6-18 Purged RATE ORP рН DO TURBIDITY WATER SpecCond MS/cm TEMP (°C) (s.u.) (mL/min) TIME (liters) (mv) (mg/L) (NTU) (FT BTOC) **COMMENTS** 0.043 100 66 7.29 0840 16. i 10.88 280 5.22 8.74 0.5 100 1.29 120 0845 19.9 8.72 - Z8 0850 100 0,91 5.38 100 0855 11 0.68 104 8.72 . 28 551 0900 109 11 . 28 56.5 5 52 0905 0.36 11 - 30 52.1 110 8.69 5.60 51.5 15.9 1.31 0.77 11 8.70 0910 RECORDED BY: OA CHECKED BY: (Signature) (Signature)

## GROUND WATER LOW-FLOW PURGE SHEFT PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: S.G.18 TIME: 0830 WELL ID NUMBER: MW-573-03-PRL05 WELL LOCATION: Bldg 573 DEPTH OF SCREENED INTERVAL (toc notch): S ft. to 15 tf. TYPE: PUC ID: Z" INNER CASING: WATER QUALITY METER ID: 82551 WATER LEVEL INDICATOR ID: 82662 PUMP ID: 83008 TURBIDITY ID: 82551 PID ID: 81470 DEPTH TO WATER: S. 22 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: ~ S FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon | Peristaltic Pump [ ] Other Pump Type 0910 PURGE END TIME: (liters) TOTAL VOLUME PURGED: M1 Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature)

# SAMPLE COLLECTION

PROJECT NAME: Kingsley Field ANGB

**DELIVERY ORDER 0011** 

DATE: S-G-18
Sample Location: Building 573

SAMPLE ID NUMBER:	MW-573-03-PRL05-01
SAMPLE LOCATION:	MW-573-03-PRL05
SAMPLE DEPTH:	101
SAMPLING POINT:	
SAMPLE MEDIA:	GW
SAMPLE TYPE	Grab

			H&S
FIELD	READING	UNITS	(Y/N)
Conductivity	1.29	S/cm	
DO	0.23	mg/L	
ORP	115	mV	
Temperature	15.9	degrees, C	
Turbidity	51.1	NTUs	
рН	8.69	S.U.	
PID	0.1	ppm	

COMMENTS: JMS/MSD

NO. CONTAINERS & VOLUME	CONTAINER TYPE	ANALYSIS	PRESERVATION TYPE (TYPE/VOL)	LABORATORY	COLLECTION CODE**
2 ea - 250-mL polypro polypropylen		PFOS/PFOA	Cool to 4°C ±2°	SAC	

<sup>\*\* &</sup>quot;X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate

SAC - TestAmerica Sacramento

TRIP BLANK ID:

## **GROUND WATER LOW-FLOW PURGE SHEET** PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5-6-18 TIME: 1030 WELL LOCATION: Bldg 573 WELL ID NUMBER: MW-572-02-PRL05 DEPTH OF SCREENED INTERVAL (toc notch): S ft. to 15 ft. TYPE: PUC ID: 2" INNER CASING: 82551 WATER QUALITY METER ID: WATER LEVEL INDICATOR ID: 82667 PUMP ID: 83 008 TURBIDITY ID: \$255 PID ID: 81470 DEPTH TO WATER: 4.65 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon [ | Peristaltic Pump [ ] Other Pump Type PURGE END TIME: 1025 PURGE START TIME: 1000 (liters) TOTAL VOLUME PURGED: Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature) (Signature)

			GR	OUND	WATER	R LOW-FLOV	N PUR	GE LOG	i i	
								WELL ID:	MIN ST	2-02-PRLOS
PROJECT	NAME: Kir	ngsley Fiel	d ANGB						ORDER 001	
Date: 5.6.18 TIME	Volume Purged (liters)	PURGE RATE (mL/min)	ORP (mv)	TEMP (°C)	pH (s.u.)	SpecCond /\subsection 5/cm	DO (mg/L)	TURBIDITY (NTU)	DEPTH TO WATER (FT BTOC)	COMMENTS
1000	-	100	140	16.1	9.79	0.90	13.57	257	4.75	
(005	0.5	100	157	15.5	9.61	6.90	9.55	175	4.78	
1010	1.0	11	160	15.5	9.64	0.90	9.23	87.5		
1015	1.5	)!	167	15.8	9.52	0.90	8.83	43,1	41.85	
1020	2.0	II	169	15.7	9.52	091	8.90	47.1	4.85	
1025	2.5	f\	1G8	15.8	9.51	0.92	8.89	435	4.88	
	[									
			LA							
RECO	ORDED BY:	Mil	(Signatu	ıre)		QA CHECKED BY: (Signature)				ıre)

#### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB DELIVERY ORDER 0011 DATE: S.6.18 TIME: 1030 Sample Location: Building 573 H&S SAMPLE ID NUMBER: **FIELD** READING UNITS MW-572-02-PRL05-01 (Y/N) 0.92 SAMPLE LOCATION: MW-572-02-PRL05 Conductivity S/cm 8.89 10, DO mg/L SAMPLE DEPTH: 168 SAMPLING POINT: ORP mV Temperature 15.8 degrees, C SAMPLE MEDIA: GW 43.5 SAMPLE TYPE Grab Turbidity **NTUs** 9.51 S.U. pH PID 1.0 ppm COMMENTS: + Duplicate on this well NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) **LABORATORY** 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° SAC

SAC - TestAmerica Sacramento

TRIP BLANK ID:

## SAMPLE COLLECTION SEDIMENT/SURFACE WATER PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5.6-18 Sample Location: North and fall TIME: /130 H&S SAMPLE ID NUMBER: KLAQ7-SQ1-01 **FIELD** READING UNITS (Y/N) KLA07-SD1 SAMPLE LOCATION: Conductivity S/cm Surface DO mg/L SAMPLE DEPTH: SAMPLING POINT: ORP mV 50,1 SAMPLE MEDIA: Temperature degrees, C SAMPLE TYPE Grab **Turbidity NTUs** S.U. pH PID ! ppm COMMENTS: + Ouplicate 4402 NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE **ANALYSIS** (TYPE/VOL) **LABORATORY** CODE\*\* 2 ea - 250-mL polypropylene with polypropylene-cap PFOS/PFOA Cool to 4°C ±2° SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento

TRIP BLANK ID:

## GROUND WATER LOW-FLOW PURGE SHEFT PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: S. 6.18 TIME: 1140 WELL LOCATION: SE COMM. of PRLOZ WELL ID NUMBER: MW-KLAOZ-01 DEPTH OF SCREENED INTERVAL (toc notch): 5 ft. to 15 ft. INNER CASING: TYPE: PVC ID: 2 inches WATER QUALITY METER ID: \$2551 WATER LEVEL INDICATOR ID: 82662 PUMP ID: 83908 TURBIDITY ID: 8255/ PID ID: 91470 DEPTH TO WATER: 3-89 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: PURGE/SAMPLE METHOD: [ ] Monsoon [ ] Peristaltic Pump [ ] Other Pump Type PURGE END TIME: 1205 PURGE START TIME: 1140 TOTAL VOLUME PURGED: (liters) [X] Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature)

#### GROUND WATER LOW-FLOW PURGE LOG WELLID: MW-KLAGZ-G) **DELIVERY ORDER 0011** PROJECT NAME: Kingsley Field ANGB PURGE **DEPTH TO** Date: 5-6-18 Volume RATE WATER Purged ORP pH DO TURBIDITY (mL/min) (mv) TEMP (°C) (s.u.) SpecCond A S/cm (mg/L) (NTU) (FT BTOC) TIME (liters) COMMENTS 3.99 100 17.1 9,57 4750) 3.89 1140 157 12.68 11 160 4.31 11,94 4710 9,34 1143 0.3 6-11 16.6 9.24 4.28 5.18 455.0 3.99 1145 4.23 17.2 4.01 11 173 7.28 4140 1150 9.09 4.32 1155 11 16.7 392.0 174 2.22 3560 11 16.5 9.08 4.05 1200 2.0 4.28 2.16 15.9 11 9.09 4.31 340.01 4.08 203 7.3 2.62 201 9.08 4.31 3330 4.09 1205 16.0 11 RECORDED BY: QA CHECKED BY: (Signature)

### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5-6-18 Sample Location: 1012-112-112 TIME: 1205 H&S MW-KLAGZ-01-01 SAMPLE ID NUMBER: **FIELD** READING **UNITS** (Y/N) SAMPLE LOCATION: MW-KLAQZ-01 Conductivity 4.31 S/cm 10' DO 7-02 SAMPLE DEPTH: mg/L ORP 177 SAMPLING POINT: mV 16-0 SAMPLE MEDIA: GW Temperature degrees, C 3320 SAMPLE TYPE Grab Turbidity **NTUs** 9.08 pН S.U. 0.0 PID ppm **COMMENTS:** NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE CODE\*\* **ANALYSIS** (TYPE/VOL) LABORATORY 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento TRIP BLANK ID:

## **GROUND WATER LOW-FLOW PURGE SHEET** PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5-6-18 TIME: 124 WELL LOCATION: SE come of PRLOG WELL ID NUMBER: MW-KLA 06 -01 DEPTH OF SCREENED INTERVAL (toc notch): 5 ft. to 15 ft. INNER CASING: TYPE: PVC ID: 2 inches WATER QUALITY METER ID: 8255 ( WATER LEVEL INDICATOR ID: 82 GC 2 83008 PUMP ID: TURBIDITY ID: \$7 SS PID ID: 814 DEPTH TO WATER: FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon [ ] Peristaltic Pump [ ] Other Pump Type PURGE START TIME: 1245 **PURGE END TIME:** TOTAL VOLUME PURGED: (liters) Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature)

#### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5.6.18 TIME: 1315 Sample Location: MWHAOG -0) H&S MW-KLA/36-01-01 SAMPLE ID NUMBER: FIELD READING UNITS (Y/N) MW-KLAUG-01 0-99 SAMPLE LOCATION: Conductivity S/cm 101 9.61 mg/L SAMPLE DEPTH: DO -167 ORP mV SAMPLING POINT: 14.2 SAMPLE MEDIA: GW Temperature degrees, C 150.0 NTUs SAMPLE TYPE Turbidity Grab 8.25 S.U. pH 00 PID ppm **COMMENTS:** NO. CONTAINERS & CONTAINER COLLECTION PRESERVATION TYPE CODE\*\* VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento TRIP BLANK ID:

## **GROUND WATER LOW-FLOW PURGE LOG** WELLID: MW-KLAGG-01 PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** Date: 5.6 18 PURGE Volume **DEPTH TO** Purged RATE ORP рН DO TURBIDITY WATER TEMP (°C) SpecCond MS/cm TIME (mL/min) (mv) (s.u.) (mg/L) (FT BTOC) (liters) (NTU) COMMENTS 151.0 \$8.35 -193 15.0 1.17 100 1245 8.61 13.24 1.02 14.1 8.70 11 -191 8.30 155.0 10.91 1250 9.25 14.0 -188 8.21 0.98 157.0 8.80 1259 1500 8.85 0.99 8.25 11 -187 1300 RECORDED BY: QA CHECKED BY: (Signature) (Signature)

## GROUND WATER LOW-FLOW PURGE SHEET PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** TIME: (1494 1340) DATE: 5618 WELL LOCATION: SU corner PRLOY WELL ID NUMBER: MW-KLAO" -01 DEPTH OF SCREENED INTERVAL (toc notch): S ft. to ( ) ft. INNER CASING: TYPE: PVC ID: 2 inches 82551 WATER QUALITY METER ID: WATER LEVEL INDICATOR ID: PUMP ID: TURBIDITY ID: \$75 PID ID: DEPTH TO WATER: 2.55 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon [ ] Peristaltic Pump [ ] Other Pump Type PURGE START TIME: 1340 PURGE END TIME: 1410 TOTAL VOLUME PURGED: 3 (liters) Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature) (Signature)

#### GROUND WATER LOW-FLOW PURGE LOG WELLID: MW-KLA04-01 PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** 5 6 - 18 PURGE Volume **DEPTH TO** Purged RATE ORP На DO TURBIDITY WATER SpecCond M S/cm TIME (liters) (mL/min) (mv) TEMP (°C) (s.u.) (mg/L) (NTU) (FT BTOC) COMMENTS 9.86 289.0 2.58 9.44 1340 -47 17.9 -64 17.0 100 2880 2.61 11 9.70 1345 -101 5-29 9.65 350 288.0 2.62 1.78 11 9.60 291.0 2.63 11 -134 1-01 1355 11 -141 9.56 0.44 2910 1400 16 0.40 290 0 2 64 9.5G -145 1405 1.64 11 0.36 15.8 9.56 1.65 2920 2.65 1410 3.0 11 -151 RECORDED BY: QA CHECKED BY: (Signature) (Signature)

### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5-6-18 TIME: 1415 Sample Location : PREOU H&S SAMPLE ID NUMBER: MW-KLA04-01-01 FIELD READING UNITS (Y/N) 1.63 MW-KLA04-01 SAMPLE LOCATION: Conductivity M\_S/cm 0.31 101 DO mg/L SAMPLE DEPTH: -159 ORP mV SAMPLING POINT: 15.6 SAMPLE MEDIA: GW Temperature degrees, C 292.0 SAMPLE TYPE Turbidity **NTUs** Grab 9.56 рН S.U. 0-1 PID ppm COMMENTS: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION **LABORATORY** CODE\*\* VOLUME TYPE ANALYSIS (TYPE/VOL) 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento TRIP BLANK ID:

## **GROUND WATER LOW-FLOW PURGE SHEET** PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** TIME: (430) DATE: 5-6-18 WELL LOCATION: SE COME PELO! WELL ID NUMBER: MW-KLA () -01 5 ft. to 10 ft. DEPTH OF SCREENED INTERVAL (toc notch): INNER CASING: TYPE: PVC ID: 2 inches WATER QUALITY METER ID: WATER LEVEL INDICATOR ID: 82662 83008 PUMP ID: TURBIDITY ID: 82551 PIDID: 814 DEPTH TO WATER: 4.32 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon [X] Peristaltic Pump [ ] Other Pump Type PURGE START TIME: **PURGE END TIME:** TOTAL VOLUME PURGED: (liters) [X] Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature)

#### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5.6 18 TIME: 1450 Sample Location : PRLO ( H&S MW-KLA<u>01</u>-01-01 SAMPLE ID NUMBER: FIELD READING **UNITS** (Y/N) MW-KLAU 1-01 19.6 SAMPLE LOCATION: Conductivity S/cm SAMPLE DEPTH: 101 DO 8.16 mg/L 128 mid point of screen SAMPLING POINT: ORP mV 15.8 SAMPLE MEDIA: GW Temperature degrees, C SAMPLE TYPE Grab 67.7 **NTUs Turbidity** pH 8.00 S.U. PID 0 ppm **COMMENTS:** NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE **ANALYSIS** (TYPE/VOL) **LABORATORY** CODE\*\* 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA SAC Cool to 4°C ±2° \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento TRIP BLANK ID:

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			GR	OUND	WATER	R LOW-FLOV	W PUR	GE LOG	i	
								WELL ID:	MW-	KLA01-01
ROJECT	IAME: Kir	ngsley Field	d ANGB						ORDER 001	•
Date: 5 6 18	Volume	PURGE						77.1	DEPTH TO	
TIME	Purged (liters)	RATE (mL/min)	ORP (mv)	TEMP (°C)	pH (s.u.)	SpecCond / S/cm	DO (mg/L)	TURBIDITY (NTU)	WATER (FT BTOC)	COMMENTS
1430		100	149	16.2	8.11	20.3			4.35	COMMENTS
1435	0.5	11	137	15.8	8.02	197	12.34	63.2	4.40	
1438	0.8	11	133	15.9	8.02	19.6	8-69	64.2	4.41	
1441	1.1	11	131	15.8	8.01	19.6	8.51	72.1	4.45	100
1445	1,5	11	129	15.8	8.00	19.6	8-35	70.1	4.46	
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				1807.						
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RECO	RDED BY:		(Signatu	17/1/		QA CHECKED BY	:		(Signatu	Ite)
			12,8,100	1 ~ /	- Land	3(1)			(Signate	

# GROUND WATER LOW-FLOW PURGE SHEET PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5.6.18 TIME: (500) WELL LOCATION: SE COME OF PRUOS WELL ID NUMBER: MW-KLA03-01 INNER CASING: TYPE: PVC ID: 2 inches WATER QUALITY METER ID: 87551 WATER LEVEL INDICATOR ID: 82662 PUMP ID: 83008 TURBIDITY ID: 82551 PID ID: \_\_\_\_81470 DEPTH TO WATER: 6 25 FT FROM MEASURE POINT DEPTH TO TOP OF SCREEN: FT FROM MEASURE POINT DEPTH TO PUMP INTAKE: 10 FT FROM MEASURE POINT PURGE/SAMPLE METHOD: [ ] Monsoon [X] Peristaltic Pump [ ] Other Pump Type PURGE START TIME: (505 PURGE END TIME: (550) TOTAL VOLUME PURGED: 4.5 (liters) [ Yes [ ] No IF NO, WHY WAS A DEVIATION NECESSARY: S&A PLAN SAMPLING PROCEDURE FOLLOWED: RECORDED BY: QA CHECKED BY: (Signature)

#### GROUND WATER LOW-FLOW PURGE LOG WELLID: MW-KLAO3-01 PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** PURGE **DEPTH TO** Date: Volume S.6 1X Purged RATE ORP WATER pH DO TURBIDITY TIME (liters) (mL/min) (mv) TEMP (°C) (s.u.) SpecCond (LS/cm (mg/L) (NTU) (FT BTOC) COMMENTS 8.97 1305 -204 6 28 turb over 1.44 100 16.3 1355 8.8 100 1.26 3.48 6.29 1510 0.5 -237 -243 15 9 8.74 475.0 G. 29 1.23 1515 13 1.0 474.0 G 30 -253 15) .20 1.5 1520 11 8.65 19 475.06.31 1525 2.0 -252 -249 472.0 6.32 0.28 2.5 15.1 8.63 1530 473.0 6.33 12 8.61 05.0 1535 3.0 -249 .17-15.2 1540 3.5 -234 470.0 6.34 471.0 0.34 14.9 4.0 -243 1.18 1545 11 8-61 472.0 6.35 1.18 4.5 11 8.61 - 245 14.7 0.10 550 **RECORDED BY:** QA CHECKED BY: (Signature) (Signature)

#### SAMPLE COLLECTION PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** DATE: 5.6.18 TIME: 1555 Sample Location: SE Corner PRLU3 H&S MW-KLA 5-01-01 SAMPLE ID NUMBER: FIELD READING UNITS (Y/N) 1.18 MW-KLACS-01 M S/cm SAMPLE LOCATION: Conductivity SAMPLE DEPTH: 10 DO 0.09 mg/L -247 SAMPLING POINT: ORP mV 14.3 SAMPLE MEDIA: GW Temperature degrees, C SAMPLE TYPE Grab Turbidity 471.0 NTUs 8.62 pH S.U. 0.0 PID ppm **COMMENTS: NO. CONTAINERS &** CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE (TYPE/VOL) CODE\*\* **ANALYSIS** LABORATORY 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate SAC - TestAmerica Sacramento TRIP BLANK ID:

#### SAMPLE COLLECTION SEDIMENT/SURFACE WATER PROJECT NAME: Kingsley Field ANGB **DELIVERY ORDER 0011** TIME: 0830 DATE: 5.7 18 South Outfall Sample Location: H&S SAMPLE ID NUMBER: KLAO8-SWL-01 **FIELD** READING **UNITS** (Y/N) 0.397 KLA08 -9/1 SAMPLE LOCATION: Conductivity S/cm DO mg/L SAMPLE DEPTH: 6-62 -27 ORP mV SAMPLING POINT: 13.2 SAMPLE MEDIA: Temperature degrees, C OVE SAMPLE TYPE Grab Turbidity **NTUs** 8.80 S.U. На PID ppm COMMENTS: NO. CONTAINERS & CONTAINER PRESERVATION TYPE COLLECTION VOLUME TYPE **ANALYSIS** (TYPE/VOL) LABORATORY CODE\*\* 2 ea - 250-mL polypropylene with polypropylene cap PFOS/PFOA Cool to 4°C ±2° SAC \*\* "X" analysis collected; "IS" insufficient volume; "NR" not required; define other code as appropriate

SAC - TestAmerica Sacramento

TRIP BLANK ID:

# APPENDIX C SURVEY REPORT FOR NEW MONITORING WELLS

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### 1045-18 LEIDOS KINGSLEY FIELD WELL LOCATIONS (5-8-18)

MW-K	LA01-01	WELL CAP	RIM	GROUND
SPCS, OR 3062, USFT,	NORTHING	181,574.9		
NAD83	EASTING	4,584,702.1		
MCCOA (DD)	LATITUDE	42.158031		
WGS84 (DD)	LONGITUDE	-121.741191		
NAVD88	ELEVATION (FT)		4,088.11	4,088.01
MW-K	LA02-01	WELL CAP	RIM	GROUND
SPCS, OR 3062, USFT,	NORTHING	185,270.4		
NAD83	EASTING	4,584,293.7		
MCCOV (DD)	LATITUDE	42.168153		
WGS84 (DD)	LONGITUDE	-121.742899		
NAVD88	ELEVATION (FT)		4,088.40	4,088.41
MW-KI	LA03-01	WELL CAP	RIM	GROUND
SPCS, OR 3062, USFT,	NORTHING	181,398.1		
NAD83	EASTING	4,584,309.8		
MCCOA (DD)	LATITUDE	42.157530		
WGS84 (DD)	LONGITUDE	-121.742628		
NAVD88	ELEVATION (FT)		4,089.72	4,089.66
MW-KI	A04-01	WELL CAP	RIM	GROUND
SPCS, OR 3062, USFT,	NORTHING	182,222.0		
NAD83	EASTING	4,584,912.3		
MCCOA (DD)	LATITUDE	42.159815		
WGS84 (DD)	LONGITUDE	-121.740451		
NAVD88	ELEVATION (FT)		4,086.43	4,086.39
MW-KLA06-01		WELL CAP	RIM	GROUND
SPCS, OR 3062, USFT,	NORTHING	183,564.5		
NAD83	EASTING	4,583,923.5		
MCCOA (DD)	LATITUDE	42.163458		
WGS84 (DD)	LONGITUDE	-121.744171		
NAVD88	ELEVATION (FT)		4,089.08	4,088.98

VERTICAL	FLEVATION.	BENCHMARK
VLIVIICAL	LLLVAIION	DENCINAMA

DID: NIVOSEO	NORTHING	185,913.9851
PID: NY0350 NGS Datasheet	EASTING	4,585,944.5715
NG3 Datasheet	ELEVATION (FT)	4,089.17

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
SEPTEMBER 13, 2016
MICHELLE McBRIDE
91128PLS

EXPIRATION DATE: 12/31/18

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## APPENDIX D DATA VALIDATION REPORTS

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### **LEIDOS Laboratory Data Verification Checklist** Kingsley Project: Page 1 of 3 **PFCs** SDG No: J39023 Analyte Group: Sample Matrix: Water/Soil EDD (Y/N): Disposition of Data Package: NCR No. (if applicable): 1. Case Narrative Read SDG Case Narrative Check Laboratory sample ID vs. Project sample ID lists Check that discussion covers each analytical type included in the SDG Υ Check for identified nonconforming items (e.g., missed holding times, etc.) 2. Chain-of-Custody (COC) Check COC sample collection, shipping, and receiving dates Check that COC signature blocks are complete Υ Check COC project sample IDs vs. Lab IDs and Result Form IDs Match COC requested analyses with Case Narrative and with data package content (Result Forms) 3. Analytical Results Form Verify that a Result Form is present for each sample and analysis On each Result Form check: SDG No. Sample ID Lab ID **Date Collected Date Extracted** Date Analyzed Υ Result Matrix Result Units

			Page 2 of	3
4. Project Verifica	ation			
	Check project anal	lyte list vs. analytes reported	_	Υ
	Check project requ	uested methods vs. analytical methods performed	l _	Υ
	Check analyte rep	orting levels vs. project reporting level goals	-	Υ
5 Analytical Qua	lity Control Informati	on		
o. Analytical Qua	•	te recovery results (e.g., org. form II)	-	Υ
	Check for LCS res	ults (e.g., org. form III, inorg. form XII)	_	Υ
	Check for method	blank results ( e.g., org. form IV, inorg. form III)	_	Υ
	Check for MS/MSI	O results (e.g., inorg. form V)	_	Υ
	Check for laborato	ry duplicate results (e.g., inorg. form VI)	_	NA
	Check for Method	Calibration and Run Documentation		
	organic:	instrument performance check initial calibration data continuing calibration data internal standard areas internal standard retention times sample clean-up documentation (org. forms V through X)	- - - - -	Y Y Y Y Y Y Y
	metal:	initial calibration data continuing calibration data method detection limits method linear range sample run sequence (inorg. forms II, IV, and VIII through XIV)	- - - -	
	other:	initial calibration data continuing calibration data method detection limits sample run sequence	- - - -	

			Page 3 of 3
. Incorrect Inforn	nation		
	Identify missing items or incorrect information (i.e., incorrect sample IDs, etc.)	missing forms,	unsigned forms,
	Contact the laboratory or project personnel to obtai or correct information	n missing inforn	nation
Document of	corrections below:		
. Nonconforming	Items		
	Document all nonconforming items that can not be a Non-Conformance Report (NCR), complete form,		
	NCR # Item		
Reviewed By:	Brooks Francis	Date:	6/15/18
A Review By:	Nochmen Stack	Date:	7/2/18

## **LEIDOS Laboratory Data Package Detail Form** Kingsley Project: Page 1 of 3 J39023 **Analyte Group:** SDG No: PFC \*\*SEE ATTACHED\*\* Field Matrix Analysis Notes: Lab Sample ID ID# Comments:

## Sample Summary

Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-39023-1	MW-KLA01-01-01	Water	05/06/18 14:50	05/08/18 09:00
320-39023-2	MW-KLA02-01-01	Water	05/06/18 12:05	05/09/18 09:20
320-39023-3	MW-KLA03-01-01	Water	05/06/18 15:55	05/08/18 09:00
320-39023-4	MW-KLA04-01-01	Water	05/06/18 14:15	05/08/18 09:00
320-39023-5	MW-573-03-PRL05-01	Water	05/06/18 09:15	05/08/18 09:00
320-39023-6	MW-572-02-PRL05-01	Water	05/06/18 10:30	05/08/18 09:00
320-39023-7	MW-KLA06-01-01	Water	05/06/18 13:15	05/08/18 09:00
320-39023-8	KLA08-SW1-01	Water	05/07/18 08:30	05/08/18 09:00
320-39023-9	KLA-01-SB1-01	Solid	05/02/18 14:00	05/09/18 09:20
320-39023-10	KLA-01-SB1-02	Solid	05/02/18 14:10	05/09/18 09:20
320-39023-11	KLA-01-SB2-01	Solid	05/02/18 13:15	05/09/18 09:20
320-39023-12	KLA-01-SB2-02	Solid	05/02/18 13:20	05/09/18 09:20
320-39023-13	KLA-01-SB3-01	Solid	05/02/18 14:25	05/09/18 09:20
320-39023-14	KLA-01-SB3-02	Solid	05/02/18 14:30	05/09/18 09:20
320-39023-15	KLA02-SB1-01	Solid	05/04/18 13:40	05/09/18 09:20
320-39023-16	KLA02-SB1-02	Solid	05/04/18 13:45	05/09/18 09:20
320-39023-17	KLA02-SB2-01	Solid	05/04/18 13:20	05/09/18 09:20
320-39023-18	KLA02-SB2-02	Solid	05/04/18 13:25	05/09/18 09:20
320-39023-19	KLA02-SB3-01	Solid	05/04/18 13:55	05/09/18 09:20
320-39023-20	KLA02-SB3-02	Solid	05/04/18 14:00	05/09/18 09:20
320-39023-21	KLA03-SB1-01	Solid	05/01/18 09:00	05/09/18 09:20
320-39023-22	KLA03-SB1-02	Solid	05/01/18 09:05	05/09/18 09:20
320-39023-23	KLA03-SB2-01	Solid	05/02/18 12:15	05/09/18 09:20
320-39023-24	KLA03-SB2-02	Solid	05/02/18 12:20	05/09/18 09:20
320-39023-25	KLA03-SB3-01	Solid	05/01/18 08:45	05/09/18 09:20
320-39023-26	KLA03-SB3-02	Solid	05/01/18 08:50	05/09/18 09:20
320-39023-27	KLA04-SB1-01	Solid	05/04/18 08:35	05/09/18 09:20
320-39023-28	KLA04-SB1-02	Solid	05/04/18 08:40	05/09/18 09:20
320-39023-29	KLA04-SB2-01	Solid	05/04/18 08:20	05/09/18 09:20
320-39023-30	KLA04-SB2-02	Solid	05/04/18 08:25	05/09/18 09:20
320-39023-31	KLA04-SB3-01	Solid	05/04/18 08:05	05/09/18 09:20
320-39023-32	KLA04-SB3-02	Solid	05/04/18 08:10	05/09/18 09:20
320-39023-33	KLA05-SB1-01	Solid	05/05/18 09:00	05/09/18 09:20
320-39023-34	KLA05-SB1-02	Solid	05/05/18 09:10	05/09/18 09:20
320-39023-35	KLA05-SB2-01	Solid	05/05/18 09:30	05/09/18 09:20
320-39023-36	KLA05-SB2-02	Solid	05/05/18 09:40	05/09/18 09:20
320-39023-37	KLA05-SB3-01	Solid	05/05/18 10:10	05/09/18 09:20
320-39023-38	KLA05-SB3-02	Solid	05/05/18 10:20	05/09/18 09:20
320-39023-39	KLA06-SB1-01	Solid	05/01/18 14:15	05/09/18 09:20
320-39023-40	KLA06-SB1-02	Solid	05/01/18 14:20	05/09/18 09:20
320-39023-41	KLA06-SB2-01	Solid	05/01/18 13:45	05/09/18 09:20
320-39023-42	KLA06-SB2-02	Solid	05/01/18 13:50	05/09/18 09:20
320-39023-43	KLA07-SD1-01	Solid	05/06/18 11:30	05/09/18 09:20
320-39023-44	ER-01	Water	05/01/18 15:30	05/09/18 09:20
320-39023-45	FB-01	Water	05/01/18 15:50	05/09/18 09:20
320-39023-46	ER-02	Water	05/02/18 09:40	05/09/18 09:20
320-39023-47	ER-03	Water	05/03/18 10:30	05/08/18 09:00
320-39023-48	ER-04	Water	05/04/18 11:00	05/09/18 09:20
320-39023-49	MW-572-02-PRL05-01D	Water	05/06/18 10:30	05/08/18 09:00
320-39023-51	KLA03-SB-2-01D	Solid		05/09/18 09:20
320-39023-52	KLA06-SB-2-02D	Solid		05/09/18 09:20
320-39023-53	KLA02-SB2-02D	Solid		05/09/18 09:20
320-39023-54	KLA02-SB1-02D	Solid	05/04/18 13:45	

## Sample Summary

Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received
320-39023-55	KLA05-SB1-01D	Solid	05/05/18 09:00 05/09/18 09:20
320-39023-56	ER-05	Water	05/06/18 16:00 05/08/18 09:00
320-39023-57	IDW-KINGSLEY-SO-LDOS01	Solid	05/07/18 09:45 05/08/18 09:00
320-39023-58	IDW-KINGSLEY-WA-LDOS01	Water	05/07/18 09:30 05/08/18 09:00
320-39023-59	KLA07-SD1-01D	Solid	05/06/18 11:30 05/08/18 09:00

## Leidos - Horsham Project Specific PFASs by LC/MS/MS Methods Data Verification/Validation

SDG No:  Laboratory:  Test America  Matrix:  The above data package has been reviewed and the analytical quality cordata have been summarized. The general criteria used to assess the analytical auditor of the following:  Case Narrative  Analytical quality cordata validation of the following:  Instrument Sensitivity Internal Standard Perport of the properties of the following:  Instrument Sensitivity Internal Standard Perport of the following:  Instrument Sensitivity Internal Standa	Checks formance and Differences  Indary Dilution  Ilidation criteria in this procedure. In are required for one point  Ile.  I
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Project Specific QA/QC or contract requirements may take priority over variation and the results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD decrease.	alidation criteria in this procedure.  In are required for one point  Ile.  Ile exception that validation
* If this SDG requires full validation; recalculations from the raw data for each ICAL, one CCV, one of each QC sample, and one field samp Data verification and data validation are essentially identical, with the requires results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD descriptions.	are required for one point le. e exception that validation
* If this SDG requires full validation; recalculations from the raw data for each ICAL, one CCV, one of each QC sample, and one field samp Data verification and data validation are essentially identical, with the requires results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD data.	are required for one point le. e exception that validation
for each ICAL, one CCV, one of each QC sample, and one field samp Data verification and data validation are essentially identical, with the requires results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD descriptions.	le. e exception that validation
Data verification and data validation are essentially identical, with the requires results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD described in the raw data.	e exception that validation
requires results to be recalculated from the raw data.  Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD d	
Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD d	iscrepancies
Remarks: DoD QSM  Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD d	iscrepancies
Some results were qualified as estimated due to surrogate, IS, and/or MS/MSD d	iscrepancies
	iscrepancies
Some results were qualified as non-detect due to blank contamination	
Definition of Qualifiers:	
"U", not detected at the associated level	
"UJ", not detected and associated value estimated	
"J", associated value estimated	
"R", associated value unusable or analyte identity unfo	punded
Brooks Francis	
Verification/Validation	04540
Red /	6/15/18
QA Reviewed by! / Chran Stack	Date:

# Page 2 of 10 **Case Narrative** Verify direct statements made within the Laboratory Case Narrative (note discrepancies). No additional discrepancies were noted Remarks: Re-analysis and Secondary Dilutions Verify that re-analysis and secondary dilutions were performed and reported as necessary. Determine appropriate results to report. Some samples were reanalyzed at a dilution Remarks: Several samples had analyte concentrations that still exceeded the upper calibration range after the maximum technically possible dilution (100x) without performing serial dilutions; these results were qualified as estilamted with reason code N03: N03: Professional judgment used to qualify data that exceeded calibration range after maximum dilution

#### **Holding Times**

Waters - Cool 4°C; 14 days to extraction; 28 days to analysis collection. Note: Trizma preservative is recommended for aqueous samples, but not required.

Soils - Cool 4°C; extraction within 28 days of sample collection; analysis within 28 days of sample extraction

#### **Deviations:**

Doviduoio.			
Sample #	Date Collected	Date Analyzed	Comments
	001100100	7 thaty 20 d	Commente

#### **Actions:**

- 1. If holding times are exceeded, all results are qualified as estimated (J/UJ)
- 2. If holding times are exceeded by more than 2X, reviewer may qualify non-detected results as unusable (R)

Remarks:	All holding times were met	

#### Injection Internal Standards (IS)

List any field samples, field QC samples, or laboratory QC samples where injection internal standards are not within 50 to 150% of the peak areas from the ICAL midpoint or daily inititial CCV, as applicable.

\*\*See attached for additional discrepancies \*\*

#### **Deviations:**

Sample #	Injection IS/% Rec	Affected PFAS Compounds
KLA-01-SB1-01DL	PFOA 228222	
	0+	

lf any injection	IS is <25%,	qualify detects as	J; non-detects as R
------------------	-------------	--------------------	---------------------

If any Injection IS is > upper control limit; qualify detects as J, no action for non-detects

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

SDG No.:

Sample No.: CCV 320-225818/3 Date Analyzed: 05/28/2018 07:15

Instrument ID: A8\_N GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard): 2018.05.27LLADX 003 Heated Purge: (Y/N) N

Calibration ID: 39198

	13PFO.	A					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		5150922	2.70				
UPPER LIMIT		7726383	2.90				
LOWER LIMIT		2575461	2.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-225818/1		4948330	2.70				
CCVL 320-225818/2		4974159	2.70				-
MB 320-223615/1-A		4525357	2.70				-
LCS 320-223615/2-A		5050927	2.71				
CCV 320-225818/14		5195418	2.70				
CCV 320-225818/25		4983990	2.70				
CCV 320-225820/1		5071434	2.70				
MB 320-224065/1-A		4644358	2.71				
LCS 320-224065/2-A		5665654	2.71				
320-39023-1	MW-KLA01-01-01	5410474	2.70				
320-39023-2	MW-KLA02-01-01	1305306Q	2.71				
320-39023-3	MW-KLA03-01-01	5330619	2.71				
320-39023-5	MW-573-03-PRL05-01	2314739Q	2.71				
320-39023-5 MS	MW-573-03-PRL05-01 MS	2201473Q	2.71				
320-39023-5 MSD	MW-573-03-PRL05-01 MSD	2321634Q	2.72				
320-39023-6	MW-572-02-PRL05-01	4879691	2.71				
CCV 320-225820/12		4860082	2.71				
320-39023-7	MW-KLA06-01-01	1650740Q	2.72				
320-39023-49	MW-572-02-PRL05-01D	6287034	2.71				
CCV 320-225820/16		4898728	2.70				

13PFOA = 13C2-PFOA13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area RT Limit =  $\pm$  0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

SDG No.:

Sample No.: CCV 320-225899/3 Date Analyzed: 05/29/2018 07:19

Instrument ID: A8\_N GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard): 2018.05.28LLB\_033.d Heated Purge: (Y/N) N

Calibration ID: 39198

	13PFO.	A					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		4832975	2.70				
UPPER LIMIT		7249463	2.90				
LOWER LIMIT		2416488	2.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-39023-10 DL	KLA-01-SB1-02 DL	239883Q	2.71				
320-39023-39 DL	KLA06-SB1-01 DL	255085Q	2.71				
320-39023-40 DL	KLA06-SB1-02 DL	236462Q	2.71				
CCV 320-226044/8		4769042	2.71				
320-39023-41 DL2	KLA06-SB2-01 DL2	52350Q	2.71				
320-39023-41 MS DL2	KLA06-SB2-01 MS DL2	53260Q	2.72				
320-39023-41 MSD DL2	KLA06-SB2-01 MSD DL2	52931Q	2.71				
320-39023-42 DL2	KLA06-SB2-02 DL2	53215Q	2.71				
320-39023-52 DL2	KLA06-SB-2-02D DL2	56168Q	2.71				
320-39023-55 DL	KLA05-SB1-01D DL	55907Q	2.71				
320-39023-41 DL	KLA06-SB2-01 DL	500756Q	2.71				
320-39023-41 MS DL	KLA06-SB2-01 MS DL	488067Q	2.71				
320-39023-41 MSD DL	KLA06-SB2-01 MSD DL	522528Q	2.71				
CCV 320-226044/19		4840719	2.71				
320-39023-42 DL	KLA06-SB2-02 DL	481468Q	2.72				
320-39023-52 DL	KLA06-SB-2-02D DL	455759Q	2.71				
CCV 320-226044/23		4662987	2.71				
CCV 320-226051/1		4655044	2.71				
320-39023-34	KLA05-SB1-02	4607254	2.71				
320-39023-19 DL	KLA02-SB3-01 DL	243200Q	2.71				
320-39023-33 DL	KLA05-SB1-01 DL	270174Q	2.71				
320-39023-35 DL	KLA05-SB2-01 DL	520023Q	2.72				
320-39023-36 DL	KLA05-SB2-02 DL	523724Q	2.71				
320-39023-17 DL	KLA02-SB2-01 DL	54227Q	2.71				
CCV 320-226051/12		4909517	2.71				
320-39023-27 DL	KLA04-SB1-01 DL	52579Q	2.71				
320-39023-28 DL2	KLA04-SB1-02 DL2	52259Q	2.71				
320-39023-29 DL	KLA04-SB2-01 DL	51909Q	2.72				

13PFOA = 13C2-PFOA13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area RT Limit =  $\pm$  0.2 minutes of internal standard RT

# Column used to flag values outside QC limits

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

SDG No.:

Sample No.: CCV 320-225899/3 Date Analyzed: 05/29/2018 07:19

Instrument ID: A8\_N GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard): 2018.05.28LLB\_033.d Heated Purge: (Y/N) N

Calibration ID: 39198

		13PF0	A				
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		4832975	2.70				
UPPER LIMIT		7249463	2.90				
LOWER LIMIT		2416488	2.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
320-39023-30 DL	KLA04-SB2-02 DL	52642Q	2.71				
320-39023-31 DL2	KLA04-SB3-01 DL2	57055Q	2.71				
320-39023-32 DL2	KLA04-SB3-02 DL2	56058Q	2.72				
320-39023-37 DL	KLA05-SB3-01 DL	50302Q	2.72				
320-39023-38 DL	KLA05-SB3-02 DL	50073Q	2.71				
CCV 320-226051/23		4597435	2.71				
320-39023-18 DL	KLA02-SB2-02 DL	244352Q	2.71				
320-39023-28 DL	KLA04-SB1-02 DL	237462Q	2.70				
320-39023-31 DL	KLA04-SB3-01 DL	252970Q	2.71				
320-39023-32 DL	KLA04-SB3-02 DL	242527Q	2.71				
320-39023-53 DL	KLA02-SB2-02D DL	281812Q	2.70				
CCV 320-226051/32		4791311	2.71				

13PFOA = 13C2-PFOA13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area RT Limit =  $\pm$  0.2 minutes of internal standard RT

 $\ensuremath{\text{\#}}$  Column used to flag values outside QC limits

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

SDG No.:

Sample No.: CCV 320-226055/3 Date Analyzed: 05/29/2018 18:33

Instrument ID: A8\_N GC Column: GeminiC18 3x100 ID: 3(mm)

Lab File ID (Standard):  $2018.05.29LLB_004.d$  Heated Purge: (Y/N) N

Calibration ID: 39198

		13PFO	A				
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		4490167	2.71				
UPPER LIMIT		6735251	2.91				
LOWER LIMIT		2245084	2.51				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-226055/1		4995766	2.71				
CCVL 320-226055/2		4987736	2.71				
320-39023-1 DL	MW-KLA01-01-01 DL	1186556Q	2.71				
320-39023-2 DL	MW-KLA02-01-01 DL	65701Q	2.72				
320-39023-3 DL	MW-KLA03-01-01 DL	120036Q	2.71				
320-39023-4 DL	MW-KLA04-01-01 DL	1297832Q	2.71				
320-39023-4	MW-KLA04-01-01	5705596	2.72				
320-39023-5 DL	MW-573-03-PRL05-01 DL	55596Q	2.71				
320-39023-5 MS DL	MW-573-03-PRL05-01 MS	56729Q	2.71				
320-39023-5 MSD DL	MW-573-03-PRL05-01 MSD DL	59482Q	2.71				
CCV 320-226055/14		4699321	2.72				
320-39023-6 DL	MW-572-02-PRL05-01 DL	680737Q	2.72				
320-39023-7 DL2	MW-KLA06-01-01 DL2	78115Q	2.71				
320-39023-49 DL	MW-572-02-PRL05-01D DL	689713Q	2.71				
320-39023-56	ER-05	4587675	2.71				
CCV 320-226055/25		4360000	2.71				

13PFOA = 13C2-PFOA13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area RT Limit =  $\pm$  0.2 minutes of internal standard RT

 $\ensuremath{\text{\#}}$  Column used to flag values outside QC limits

#### **Surrogates/Extraction Internal Standards (IS)**

List any field samples, field QC samples, or laboratory QC samples where surrogates/extraction internal standards are not within 50% ± of their true value.

**Note**: Extraction Internal Standards and surrogates are the same thing. For purposes of data validation and applying validation reason codes, they will be treated as surrogates. Injection internal standards will be treated as internal standards and the use of internal standard reason codes will be used.

		4.5		
De	VIZ	111	იn	e.

\*\*SEe attached for additional discrepancies\*\*

Sample #	Surrogate - % Rec	Affected PFAS Compounds
KLA-01-SB1-01	PFOS 48%	
KLA06-SB2-02	PFNA 44%	
	PFOS 40%	
KLA06-SB-2-02D	PFNA 47%	
	PFOS 44%	
_		

#### **Actions:**

If any injection IS is <25%, qualify detects as J; non-detects as R

If any Injection IS is > upper control limit; qualify detects as J, no action for non-detects

If any surrogate is ≥ 25%, but < the lower control limit, then qualify detects as J, non-detects as UJ

Surrogate -	Target	PFAS	Compounds	<b>Associations:</b>
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13C3-PFBS - PFBS
13C3-PFHxS - PFHxS
13C4-PFHpA - PFHpA
13C8-PFOA - PFOA
13C9-PFNA - PFNA
13C8-PEOS - PEOS

Remarks:			

## FORM II LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job	No.:	320-39023-1
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SDG No.:

Matrix: Solid Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBS	#	PFHpA #	PFHxS #	PFOA #	PFOS	#	PFNA	#
KLA02-SB1-01	320-39023-15	81		93	88	93	86		100	
KLA02-SB1-02	320-39023-16	71		81	77	84	76		85	
KLA02-SB2-01	320-39023-17	78		85	78	94	55		66	
KLA02-SB2-01 DL	320-39023-17 DL	94	М	72	66	87	68		84	
KLA02-SB2-02	320-39023-18	82		78	72	89	60		71	
KLA02-SB2-02 DL	320-39023-18 DL	71		78	82	91	71		86	
KLA02-SB3-01	320-39023-19	78		86	82	92	68		85	
KLA02-SB3-01 DL	320-39023-19 DL	77	Μ	84	75	91	74		100	
KLA02-SB3-02	320-39023-20	75		80	80	90	76		92	
KLA04-SB1-01	320-39023-27	87		98	87	88	30	Q	37	Q
KLA04-SB1-01 DL	320-39023-27 DL	99	Μ	77	67	93	70		79	
KLA04-SB1-02	320-39023-28	95		85	78	84	26	Q	34	Q
KLA04-SB1-02 DL	320-39023-28 DL	70	Μ	84	71	84	59		76	
KLA04-SB1-02 DL2	320-39023-28 DL2	96	Μ	80	76	95	63		73	
KLA04-SB2-01	320-39023-29	96		88	86	83	18	Q	25	Q
KLA04-SB2-01 DL	320-39023-29 DL	111	Μ	74	64	80	58		68	
KLA04-SB2-02	320-39023-30	125		69	65	82	39	Q	55	
KLA04-SB2-02 DL	320-39023-30 DL	133	Μ	70	78	95	61		78	
KLA04-SB3-01	320-39023-31	86		88	77	84	20	Q	28	Q
KLA04-SB3-01 DL	320-39023-31 DL	54		75	69	82	47	Q	59	
KLA04-SB3-01 DL2	320-39023-31 DL2	71	Μ	74	53	78	57		73	
KLA04-SB3-02	320-39023-32	109		77	65	87	39	Q	51	
KLA04-SB3-02 DL	320-39023-32 DL	88		84	76	87	63		78	
KLA04-SB3-02 DL2	320-39023-32 DL2	72	Μ	62	69	89	64		78	
KLA05-SB1-01	320-39023-33	72		81	68	90	68		74	
KLA05-SB1-01 DL	320-39023-33 DL	54		83	75	97	69		90	
KLA05-SB1-02	320-39023-34	68		81	70	88	72		88	
KLA05-SB2-01	320-39023-35	69		85	71	92	73		89	
KLA05-SB2-01 DL	320-39023-35 DL	59		82	70	86	69		89	
KLA05-SB2-02	320-39023-36	70		74	74	85	72		87	
KLA05-SB2-02 DL	320-39023-36 DL	72		77	72	92	70	$\neg$	85	$\neg$
KLA05-SB3-01	320-39023-37	122		66	46 Q	87	13	Q	19	Q
KLA05-SB3-01 DL	320-39023-37 DL	60	Μ	80	75	82	53	$\neg$	68	$\neg$
KLA05-SB3-02	320-39023-38	73		81	73	87	40	Q	50	
KLA05-SB3-02 DL	320-39023-38 DL	78	Μ	81	79	99	70		98	

	QC LIMITS
PFBS = 13C3-PFBS	50-150
PFHpA = 13C4-PFHpA	50-150
PFHxS = 1802 PFHxS	50-150
PFOA = 13C4 PFOA	50-150
PFOS = 13C4 PFOS	50-150
PFNA = 13C5 PFNA	50-150

 $<sup>\</sup>ensuremath{\text{\#}}$  Column to be used to flag recovery values

## FORM II LCMS SURROGATE RECOVERY

Lab	Name:	TestAmerica	Sacramento	Job	No.:	320-39023-1
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SDG No.:

Matrix: Water Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

											—
Client Sample ID	Lab Sample ID	PFBS	#	PFHpA	#	PFHxS #	PFOA #	PFOS	#	PFNA	#
MW-KLA01-01-01	320-39023-1	75		79		80	87	74		81	$\dashv$
MW-KLA01-01-01 DL	320-39023-1 DL	72		77		72	83	67		77	$\neg$
MW-KLA02-01-01	320-39023-2	321	Q	44	Q	77	65	28	Q	40	Q
MW-KLA02-01-01 DL	320-39023-2 DL	176	Q	54		96	68	44	Q	53	
MW-KLA03-01-01	320-39023-3	75		69		66	85	54		62	$\neg$
MW-KLA03-01-01 DL	320-39023-3 DL	68	Μ	72		72	83	75		77	$\neg$
MW-KLA04-01-01	320-39023-4	71		74		69	80	69		79	
MW-KLA04-01-01 DL	320-39023-4 DL	63		65		62	75	62		67	$\neg$
MW-573-03-PRL05-01	320-39023-5	136		46	Q	54	77	48	Q	58	$\neg$
MW-573-03-PRL05-01 DL	320-39023-5 DL	99	Μ	64		73	73	66		69	
MW-572-02-PRL05-01	320-39023-6	85		83		81	89	74		82	
MW-572-02-PRL05-01 DL	320-39023-6 DL	69	Μ	79		77	92	75		84	
MW-KLA06-01-01	320-39023-7	233	Q	37	Q	54	52	36	Q	50	
MW-KLA06-01-01 DL2	320-39023-7 DL2	145	М	53		76	58	46	Q	51	
MW-572-02-PRL05-01 D	320-39023-49	59		60		58	65	55		61	
MW-572-02-PRL05-01 D DL	320-39023-49 DL	53		56		52	63	53		60	
ER-05	320-39023-56	84		93		87	98	91		104	
	MB 320-224065/1-A	88		93		94	103	92		106	
	LCS 320-224065/2-A	66		70		70	74	66		72	
MW-573-03-PRL05-01 MS	320-39023-5 MS	146		48	Q	55	80	48	Q	62	
MW-573-03-PRL05-01 MS DL	320-39023-5 MS DL	107	Μ	64		82	86	61		71	
MW-573-03-PRL05-01 MSD	320-39023-5 MSD	134		45	Q	54	76	45	Q	58	
MW-573-03-PRL05-01 MSD DL	320-39023-5 MSD DL	107	Μ	65		76	76	64		72	

	QC LIMITS
PFBS = 13C3-PFBS	50-150
PFHpA = 13C4-PFHpA	50-150
PFHxS = 1802 PFHxS	50-150
PFOA = 13C4 PFOA	50-150
PFOS = 13C4 PFOS	50-150
PFNA = 13C5 PFNA	50-150

<sup>#</sup> Column to be used to flag recovery values

#### VI. Blanks

A method blank was reported for each aqueous analytical batch and one method blank was reported for each soil extraction batch? (Y/N)

Review associated laboratory and project blank samples. List documented contamination below:

#### **Laboratory Method Blanks:**

Date:	Sample ID#	Compound	Conc.
5/21/18	MB 320-224509	PFOS	1.82 ng/L
-			
	-		

#### Associated Project Blanks (e.g., equipment rinsates, field reagent blanks, source blanks, etc.)

Date	Sample ID #	Compound	Conc.
5/6/18	ER-05	PFOA	0.74 ng/L
		PFBS	0.52 ng/L
		PFOS	13 ng/L
5/4/18	ER-04	PFOS	1.3 ng/L
5/1/18	FB-01	PFOS	1.7 ng/L
5/1/18	ER-01	PFHpA	0.88 ng/L
		PFOA	1.7 ng/L
		PFBS	0.40 ng/L
		PFOS	8.7 ng/L
5/2/18	ER-02	PFOA	0.52 ng/L
		PFOS	4.4 ng/L

Remarks:			

Page 7 of 10

#### VI. Blanks (continued)

Calculate the action level based on 5X the highest blank concentration

Sample weights, volumes, and dilution factors must be taken into account when applying the 5X criteria.

1.82 ng/L \* 0.01L/0.25L = 0.00909 ng/mL \*10mL/0.25L=

#### **Deviations:**

Maximum Conc. Detected, (ppb)	Action Level (ppb)	Samples Affected
1.82 ng/L	0.364 ng/L	320-224509 320-39023-8 MB <b>320-224</b> 50
0.00909 ng/mL	0.0909 ug/kg or 1.81 ng	L CCB All samples
		Sampled 5/1/18 Results either ND or >AL
1.7 ng/L	8.5 ng/L 0.017 ug/k	D II M AID AI
0.40 ng/L	2.0 ng/L 0.004 ug/k	
8.7 ng/L	43.5 ng/L 0.087 ug/k	
1.7 ng/L 8.5	8.5 ng/L 0.017 ug/kg	All samples Results either ND or >AL
0.52 ng/L		Sampled 5/2/18 Results either ND or >A
4.4 ng/L	22.0 ng/L 0.04 ug/kg	Results either ND or >AL
1.3 ng/L	6.5 ng/L	Sampled 5/4/18 Results either ND or >AL
0.74 ng/L 3.7	3.7 ng/L	Sampled 5/6/18 Results either ND or >AL
0.52 ng/L 2.6		
13 ng/L 65	65 ng/L	Results either ND or >AL
blanks (ER) prepared th	ne same as aqueous s	amples so AL is ER*5 for any aqueous sample
	Detected, (ppb)  1.82 ng/L  0.00909 ng/mL  0.88 ng/L  1.7 ng/L  0.40 ng/L  8.7 ng/L  1.7 ng/L  8.5  0.52 ng/L  4.4 ng/L  1.3 ng/L  0.74 ng/L  3.7  0.52 ng/L  2.6  13 ng/L  65	Detected, (ppb)       0.364 ng/L         0.00909 ng/mL       0.0909 ug/kg or 1.81 ng         0.88 ng/L       4.40 ng/L       0.008 ug/kg         1.7 ng/L       8.5 ng/L       0.017 ug/kg         0.40 ng/L       2.0 ng/L       0.004 ug/kg         8.7 ng/L       43.5 ng/L       0.087 ug/kg         1.7 ng/L       8.5       8.5 ng/L       0.017 ug/kg         0.52 ng/L       2.6 ng/L       0.005 ug/kg         4.4 ng/L       22.0 ng/L       0.04 ug/kg         1.3 ng/L       6.5 ng/L         0.74 ng/L       3.7       3.7 ng/L         0.52 ng/L       2.6 ng/L

#### **Actions:**

- 1. If compound results exceed the action levels, the data are not qualified
- 2. If compound results are below the required reporting level, report results as non-detect (U) at the LOD
- 3. If the compound is detected above the reporting level, but below the action level, qualify as not-detected (U)
- 4. If contamination exists in method blanks < 1/2 LOQ, samples must be re-extracted and reanalyzed.

  Unlesss the MB results are < 1/10 the amount in associated samples or < 10 the action level, which ever is greater

Remarks:		

#### VII. Initial & Contining Calibration

Date of initial calibration: %RSD of RFs < 20% or Analytes within 70-130% ICV within ± 30% of true	$r^2 \ge 0.99 \text{ for their tree}$		•	AL standard?
Date(s) of continuing ca CCV analyzed at beginn CCV within ± 30% of true	ing and er	nd of analy	rtical sequ	ence and after every 10 field samples?
Instrument sensitivity che ICS within ± 30% of true		performed	at the LC	Q prior to analysis and every 12 hours?
Deviations:				
Compound	Date	r value	%Drift	Samples Affected
·				
		-		
Actions:				
estimated (UJ), using pro then only qualify those re	ofessional ju sults near t	udgement ( the low star	i.e. if only t ndard).	we results as estimated (J) and non-detects as he low standard is out, and the higher stards are in,
				V does bracket field samples, then CCV actions apply
				s estimated (J). Nondects require no action. ry, qualify results as estimated (J/UJ).
				J) and nondetects as rejected (R)
<ul><li>6. If CCVs were not analyze</li><li>7. If ISC is &gt; UCL, estimate reject (R) non-detects</li></ul>				rofessional judgement. tects; If ISC is < LCL, estimate data (J/UJ), if ISC is < 30%
Remarks:	All calibrati	on results m	et control lir	nits

#### IX. Matrix Spike/Matrix Spike Duplicate Information

General MS/MSD Criteria:

percent recovery (%R) in-house limits relative percent difference (RPD) 30% RPD

Project Sample(s) Spiked: MW-573-03-PRL05-01 MW-573-03-PRL05-01DL

KLA02-SB1-01 KLA06-SB2-01 KLA06-SB2-01DL

**Deviations:** KLA07-SD1-01D

	%R	%R	RPD	RPD	
Compound		Limits		Limits	Samples Affected
PFHpA	125/141	76-124			KLA06-SB2-01
PFOA	151/205	76-121			KLA06-SB2-01
PFHpA	181/194	76-124			KLA06-SB2-01DL
PFOA	177/226	76-121			
PFBS	153	73-124			
PFOS	48	69-131			KLA02-SB1-01

#### **Actions:**

- 1. If the spike recovery is above the upper control limit (UCL), qualify all positive values in the unspiked sample as estimated (J) and non-detects as estimated (UJ).
- 2. If the spike recovery is below the lower control limit (LCL), qualifty positive values as estimated (J). And non-detects as estimated (UJ).
- 3. If the spike recovery is <10%, qualify non-detect values as unusable (R)
- 4. If the RPD does not meet criteria, qualify positive values in the unspiked sample as estimated (J)
- 5. Use professional judgement to qualify additional samples in the analytical group based on MS/MSD results
- 6. Use professional judgement for qualification of data for unspiked compounds
- \* If this SDG requires full validation; recalculate at least one % recovery and one % RPD from the raw data. Attach all calculations at the end of the validation checklist.

_							
R	Δ	m	а	ri	K	S	•

Sample concentrations > 4 x the spike amount precluded an assessment of accuracy; results were not qualified for samples with elevated native concentrations

#### X. Laboratory Control Sample Information

General LCS Criteria:
Percent recovery (%R) = in-house limits
RPD if LCSD performed = 30% RPD

Laboratory LCS Identifications: LCS 320-223091 LCS 320-223092 LCS 320-223346 LCS 320-223615

LCS 320-223901 LCS 320-224065 LCS 320-224254 LCS/D 320-224509

#### **Deviations:**

Compound	Date	%R	Samples Affected/Qualifiers Applied

#### **Actions:**

\* If this SDG requires full validation; recalculate at least one % recovery and one % RPD (if LCSD was performed) from the raw data. Attach all calculations at the end of the validation checklist.

Action should be based on both the number of compounds outside the criterion and the magnitude of the exceedance.

- 1. If the LCS recovery is below limits but > one- half the lower limit, qualify valves as estimated (J/UJ).
- 2. If the LCS recovery is < one-half the lower limit, qualify detect (J) and non-detects (R)
- 3. If the LCS recovery is greater than the upper limit, qualify positive valves for that analyte as estimated (J).
- 5. Use professional judgement for qualification of data for compounds with no LCS information

Remarks:	All LCS/LCSD %R and RPD results met control limits

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA01-01-01 Lab Sample ID: 320-39023-1

Date Collected: 05/06/18 14:50 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7.6		1.9	0.59	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorooctanoic acid (PFOA)	20		1.9	0.52	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorononanoic acid (PFNA)	0.56	J M J	1.9	0.50	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorobutanesulfonic acid (PFBS)	39	M =	1.9	0.44	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorohexanesulfonic acid (PFHxS)	220		1.9	0.37	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorooctanesulfonic acid (PFOS)	510	E *	3.9	1.1	ng/L		05/18/18 10:26	05/28/18 11:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C4-PFHpA	79		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C4 PFOA	87		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C5 PFNA	81		50 - 150				05/18/18 10:26	05/28/18 11:18	1
1802 PFHxS	80		50 <sub>-</sub> 150				05/18/18 10:26	05/28/18 11:18	1
1002 FF1133	00		30 - 130				00000.	00.200	
	74		50 - 150					05/28/18 11:18	1
13C4 PFOS Method: EPA 537 (Mod) - PFA	74 S for QSM !	5.1, Table B Qualifier	50 - 150	DL	Unit	D			1 Dil Fac
13C4 PFOS  Method: EPA 537 (Mod) - PFAS  Analyte  Perfluoroheptanoic acid (PFHpA)	74 S for QSM ! Result		50 - 150 - <b>15 - DL</b>		Unit ng/L	<u>D</u>	05/18/18 10:26  Prepared	05/28/18 11:18	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	74 S for QSM ! Result	Qualifier  J D *	50 - 150 3-15 - DL LOQ	2.9		<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26	05/28/18 11:18  Analyzed	Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	74 S for QSM ! Result 7.5 22	Qualifier  J D *	50 - 150 6-15 - DL LOQ 9.7	2.9 2.6	ng/L	<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26	05/28/18 11:18  Analyzed  05/29/18 18:41	Dil Fac
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	74 S for QSM ! Result 7.5 22 7.2	Qualifier J D * D	50 - 150 3-15 - DL LOQ 9.7 9.7	2.9 2.6 2.5	ng/L ng/L	<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	05/28/18 11:18  Analyzed  05/29/18 18:41 05/29/18 18:41	Dil Fac 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluoronoctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	74 S for QSM ! Result 7.5 22 7.2	Qualifier J D * D U M D M	50 - 150 S-15 - DL LOQ 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/28/18 11:18  Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41	<b>Dil Fac</b> 5 5 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	74 S for QSM ! Result 7.5 22 7.2 40	Qualifier J D * D U M D M	50 - 150 5-15 - DL LOQ 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u> _	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	<b>Dil Fac</b> 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	74 S for QSM ! Result 7.5 22 7.2 40	Qualifier JD * D UM DM D D J K01	50 - 150 5-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	Dil Fac 5 5 5 5 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	74 S for QSM ! Result 7.5 22 7.2 40 230 500	Qualifier JD * D UM DM D D J K01	50 - 150 5-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  Analyzed	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	74 S for QSM ! Result 7.5 22 7.2 40 230 500 %Recovery	Qualifier JD * D UM DM D D J K01	50 - 150 5-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7 19	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26	Analyzed  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  O5/29/18 18:41  Analyzed	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	74 S for QSM 9 Result 7.5 22 7.2 40 230 500  %Recovery	Qualifier JD * D UM DM D D J K01	50 - 150  6-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7 19  Limits 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41  4nalyzed 05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	74 S for QSM 9 Result 7.5 22 7.2 40 230 500  %Recovery 72 77	Qualifier JD * D UM DM D D J K01	50 - 150 6-15 - DL LOQ 9.7 9.7 9.7 9.7 19 Limits 50 - 150 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41  05/29/18 18:41  Analyzed  05/29/18 18:41 05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA: Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	74 S for QSM 8 Result 7.5 22 7.2 40 230 500  %Recovery 72 77 83	Qualifier JD * D UM DM D D J K01	50 - 150  5-15 - DL LOQ 9.7 9.7 9.7 9.7 19  Limits 50 - 150 50 - 150 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41  05/29/18 18:41  Analyzed  05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

Client Sample ID: MW-KLA02-01-01

Date Collected: 05/06/18 12:05

Lab Sample ID: 320-39023-2

Matrix: Water

Date Received: 05/09/18 09:20

Analyte	Result	Quali	fier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7300	E	*	1.8	0.55	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorooctanoic acid (PFOA)	13000	ΕM	*	1.8	0.49	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorononanoic acid (PFNA)	340	M	J G02 K01	1.8	0.47	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorobutanesulfonic acid (PFBS)	1500	EM	*	1.8	0.42	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorohexanesulfonic acid (PFHxS)	14000	E M	*	1.8	0.34	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorooctanesulfonic acid (PFOS)	88000	E M	*	3.6	1.0	ng/L		05/18/18 10:26	05/28/18 11:26	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Isotope Dilution

Client Sample ID: MW-KLA02-01-01 Lab Sample ID: 320-39023-2

Date Collected: 05/06/18 12:05 **Matrix: Water** Date Received: 05/09/18 09:20

Limits

Prepared

Analyzed

Dil Fac

%Recovery Qualifier

13C3-PFBS	321	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	1
13C4-PFHpA	44	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	1
13C4 PFOA	65		50 - 150				05/18/18 10:26	05/28/18 11:26	1
13C5 PFNA	40	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	1
18O2 PFHxS	77		50 - 150				05/18/18 10:26	05/28/18 11:26	1
13C4 PFOS	28	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	1
Method: EPA 537 (Mod) - PFAS	S for QSM 5	5.1. Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7700	D *	J K01 180	55	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorooctanoic acid (PFOA)	21000	D *	J K01 180	49	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorononanoic acid (PFNA)	340	DM *	J K01 180	47	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorobutanesulfonic acid (PFBS)	9700		180 J K01	42	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorohexanesulfonic acid (PFHxS)	66000	ED JKO	)1 , N03 <sup>180</sup>	34	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorooctanesulfonic acid	380000	ED JG	02 K01 360	100	ng/L		05/18/18 10:26	05/29/18 18:49	100
(PFOS)			N03						
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	176	Q	50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C4-PFHpA	54		50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C4 PFOA	68		50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C5 PFNA	53		50 - 150				05/18/18 10:26	05/29/18 18:49	100
1802 PFHxS	96		50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C4 PFOS	44	^	50 <sub>-</sub> 150				05/40/40 40 00	05/29/18 18:49	100

Client Sample ID: MW-KLA03-01-01 Lab Sample ID: 320-39023-3

Method: EPA 537 (Mod) - PFA	S for QSM 5	5.1, Table I	3-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	200		2.0	0.61	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorooctanoic acid (PFOA)	290		2.0	0.54	ng/L		05/18/18 10:26	05/28/18 11:34	•
Perfluorononanoic acid (PFNA)	16	M =	2.0	0.52	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorobutanesulfonic acid (PFBS)	180		2.0	0.46	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorohexanesulfonic acid (PFHxS)	1800	E *	2.0	0.38	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorooctanesulfonic acid (PFOS)	5200	E *	4.0	1.1	ng/L		05/18/18 10:26	05/28/18 11:34	•
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C4-PFHpA	69		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C4 PFOA	85		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C5 PFNA	62		50 - 150				05/18/18 10:26	05/28/18 11:34	
18O2 PFHxS	66		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C4 PFOS	54		50 - 150				05/18/18 10:26	05/28/18 11:34	1

Result Qualifier DL Unit Prepared Analyzed 100 05/18/18 10:26 05/29/18 19:04 Perfluoroheptanoic acid (PFHpA) 190 D \* 30 ng/L

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: MW-KLA03-01-01 Lab Sample ID: 320-39023-3

Date Collected: 05/06/18 15:55 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qual	ifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	300	D	*	100	27	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorononanoic acid (PFNA)	75	U	*	100	26	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorobutanesulfonic acid (PFBS)	170	D	*	100	23	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorohexanesulfonic acid (PFHxS)	2700	D	J K01	100	19	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorooctanesulfonic acid (PFOS)	6100	D M	J K01	200	55	ng/L		05/18/18 10:26	05/29/18 19:04	50
Isotope Dilution	%Recovery	Qual	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68	М		50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4-PFHpA	72			50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4 PFOA	83			50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C5 PFNA	77			50 - 150				05/18/18 10:26	05/29/18 19:04	50
1802 PFHxS	72			50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4 PFOS	75			50 - 150				05/18/18 10:26	05/29/18 19:04	50

Client Sample ID: MW-KLA04-01-01

Date Collected: 05/06/18 14:15

Lab Sample ID: 320-39023-4

Matrix: Water

Date Collected: 05/06/18 14:15
Date Received: 05/08/18 09:00

69

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	27		2.0	0.60	ng/L		05/18/18 10:26	05/29/18 19:20	1
Perfluorooctanoic acid (PFOA)	41		2.0	0.53	ng/L		05/18/18 10:26	05/29/18 19:20	1
Perfluorononanoic acid (PFNA)	1.5	UM U	2.0	0.51	ng/L		05/18/18 10:26	05/29/18 19:20	1
Perfluorobutanesulfonic acid (PFBS)	96		2.0	0.45	ng/L		05/18/18 10:26	05/29/18 19:20	1
Perfluorohexanesulfonic acid (PFHxS)	610	E *	2.0	0.38	ng/L		05/18/18 10:26	05/29/18 19:20	1
Perfluorooctanesulfonic acid (PFOS)	100		4.0	1.1	ng/L		05/18/18 10:26	05/29/18 19:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71		50 - 150				05/18/18 10:26	05/29/18 19:20	1
13C4-PFHpA	74		50 - 150				05/18/18 10:26	05/29/18 19:20	1
13C4 PFOA	80		50 - 150				05/18/18 10:26	05/29/18 19:20	1
13C5 PFNA	79		50 - 150				05/18/18 10:26	05/29/18 19:20	1
1802 PFHxS	69		50 - 150				05/18/18 10:26	05/29/18 19:20	1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	31	D *	9.9	3.0	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorooctanoic acid (PFOA)	43	D *	9.9	2.7	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorononanoic acid (PFNA)	7.4	U M *	9.9	2.6	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorobutanesulfonic acid (PFBS)	95	D *	9.9	2.3	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorohexanesulfonic acid (PFHxS)	690	<b>D</b> J K01	9.9	1.9	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorooctanesulfonic acid (PFOS)	100	D *	20	5.4	ng/L		05/18/18 10:26	05/29/18 19:12	5

50 - 150

05/18/18 10:26 05/29/18 19:20

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA04-01-01 Lab Sample ID: 320-39023-4

Date Collected: 05/06/18 14:15 Matrix: Water Date Received: 05/08/18 09:00

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	63		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4-PFHpA	65		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4 PFOA	75		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C5 PFNA	67		50 - 150	05/18/18 10:26	05/29/18 19:12	5
18O2 PFHxS	62		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4 PFOS	62		50 - 150	05/18/18 10:26	05/29/18 19:12	5

Date Collected: 05/06/18 09:15 Matrix: Water

Method: EPA 537 (Mod) - PFA Analyte		Qualifier		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	4400	E J1	*	2.0	0.60	ng/L		05/18/18 10:26	05/28/18 11:50	
Perfluorooctanoic acid (PFOA)	4700	E J1	*	2.0	0.54	ng/L		05/18/18 10:26	05/28/18 11:50	
Perfluorononanoic acid (PFNA)	200	J1 J	K01	2.0	0.52	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorobutanesulfonic acid (PFBS)	1900	E J1 M	*	2.0	0.46	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorohexanesulfonic acid (PFHxS)	12000	E J1	*	2.0	0.38	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorooctanesulfonic acid (PFOS)	32000	J1 E M	*	4.0	1.1	ng/L		05/18/18 10:26	05/28/18 11:50	1
Isotope Dilution	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	136			50 - 150				05/18/18 10:26	05/28/18 11:50	
13C4-PFHpA	46	Q		50 - 150				05/18/18 10:26	05/28/18 11:50	1
13C4 PFOA	77			50 - 150				05/18/18 10:26	05/28/18 11:50	1
13C5 PFNA	58			50 - 150				05/18/18 10:26	05/28/18 11:50	
								05/40/40 40:06	05/28/18 11:50	1
1802 PFHxS	54			50 - 150				05/18/18 10:26	03/20/10 11.30	,
1802 PFHxS 13C4 PFOS		Q		50 - 150 50 - 150					05/28/18 11:50	
	48 S for QSM !	•	le B-1	50 - 150	DL	Unit	D	05/18/18 10:26	05/28/18 11:50	1
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	48 S for QSM ! Result	5.1, Tabl	le B-1	50 <sub>-</sub> 150		Unit ng/L	<u>D</u>	05/18/18 10:26  Prepared		Dil Fac
13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)	S for QSM Result	5.1, Tabl Qualifier J1 D	l <b>e B-1</b>	50 - 150 15 - DL LOQ	60	ng/L	<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26	05/28/18 11:50 Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	48 S for QSM ( Result 5100 6700	5.1, Tabl Qualifier J1 D	le <b>B-1</b> J K01 J K01	50 - 150 15 - DL LOQ 200	60 54	ng/L ng/L	<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26	05/28/18 11:50  Analyzed 05/29/18 19:28	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	48 S for QSM 4 Result 5100 6700 190	5.1, Tabl Qualifier J1 D J1 D J J1 D N	le <b>B-1</b> J K01 J K01	50 - 150 15 - DL LOQ 200 200	60 54 52	ng/L	<u>D</u>	05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	05/28/18 11:50  Analyzed  05/29/18 19:28 05/29/18 19:28	Dil Fac 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	48 S for QSM ( Result 5100 6700 190 3900	5.1, Tabl Qualifier J1 D J1 D J J1 D N	J K01 J K01 J K01	50 - 150 15 - DL LOQ 200 200 200	60 54 52 46	ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/28/18 11:50  Analyzed  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28	Dil Fac 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	48 S for QSM (  Result  5100 6700 190 3900	5.1, Tabl Qualifier J1 D J1 D J J1 D N J1 D	J K01 J K01 J K01 J K01	50 - 150 15 - DL LOQ 200 200 200 200 200	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	Dil Face 1000 1000 1000 1000 1000
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	48 S for QSM (  Result  5100 6700 190 3900	5.1, Tabl Qualifier J1 D J1 D J J1 D N J1 D E J1 D	J K01 J K01 J K01 J K01 J K01 J K01	50 - 150 15 - DL LOQ 200 200 200 200 100 100 100 100	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u> _	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	Dil Fac 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	48 Result 5100 6700 190 3900 39000 63000  **Recovery*	5.1, Tabl Qualifier J1 D J1 D J J1 D N J1 D E J1 D	J K01 J K01 J K01 J K01 J K01	50 - 150   5 - DL LOQ 200 200 200 200 1 N0300	60 54 52 46 38	ng/L ng/L ng/L ng/L	D	Prepared  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	Dil Face 1000 1000 1000 1000 1000 1000 1000
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	48 Result 5100 6700 190 3900 39000 63000  **Recovery*	5.1, Tabl Qualifier J1 D J1 D J J1 D M J1 D E J1 D J1 E D	J K01 J K01 J K01 J K01 J K01	50 - 150    5 - DL	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26	Analyzed  O5/29/18 19:28  O5/29/18 19:28  O5/29/18 19:28  O5/29/18 19:28  O5/29/18 19:28  O5/29/18 19:28  Analyzed	100 100 100 100 100 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	48 S for QSM 8 Result 5100 6700 190 3900 39000 63000  **Recovery 99	5.1, Tabl Qualifier J1 D J1 D J J1 D M J1 D E J1 D J1 E D	J K01 J K01 J K01 J K01 J K01	50 - 150    5 - DL	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28  Analyzed  05/29/18 19:28	Dil Fac  100  100  100  100  100  100  Dil Fac  100  100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	48 S for QSM 5 Result 5100 6700 190 3900 39000 63000  **Recovery 99 64	5.1, Tabl Qualifier J1 D J1 D J J1 D M J1 D E J1 D J1 E D	J K01 J K01 J K01 J K01 J K01 J K01	50 - 150  15 - DL  LOQ  200  200  200  200  1 N0300  Limits  50 - 150  50 - 150	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28  Analyzed  05/29/18 19:28 05/29/18 19:28	Dil Fac  100  100  100  100  100  100  100  1
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	48 Result 5100 6700 190 3900 39000 63000  **Recovery 99 64 73	5.1, Tabl Qualifier J1 D J1 D J J1 D M J1 D E J1 D J1 E D	J K01 J K01 J K01 J K01 J K01 J K01	50 - 150    5 - DL	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28  05/29/18 19:28  Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	Dil Face 1000 1000 1000 1000 1000 1000 1000 10

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Client Sample ID: MW-572-02-PRL05-01 Lab Sample ID: 320-39023-6

Date Collected: 05/06/18 10:30 **Matrix: Water** 

Date Received: 05/08/18 09:00

Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	25		1.9	0.57	ng/L		05/18/18 10:26	05/28/18 12:13	1
Perfluorooctanoic acid (PFOA)	56		1.9	0.51	ng/L		05/18/18 10:26	05/28/18 12:13	1
Perfluorononanoic acid (PFNA)	3.8		1.9	0.49	ng/L		05/18/18 10:26	05/28/18 12:13	1
Perfluorobutanesulfonic acid (PFBS)	27		1.9	0.43	ng/L		05/18/18 10:26	05/28/18 12:13	1
Perfluorohexanesulfonic acid (PFHxS)	360	E *	1.9	0.36	ng/L		05/18/18 10:26	05/28/18 12:13	1
Perfluorooctanesulfonic acid (PFOS)	1100	EM *	3.8	1.0	ng/L		05/18/18 10:26	05/28/18 12:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	85		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C4-PFHpA	83		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C4 PFOA	89		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C5 PFNA	82		50 - 150				05/18/18 10:26	05/28/18 12:13	1
1802 PFHxS	81		50 - 150				05/18/18 10:26	05/28/18 12:13	1
1002 F1 1133									
13C4 PFOS Method: EPA 537 (Mod) - PFA	74 S for QSM	5.1, Table E	50 - 150 <b>3-15 - DL</b>				05/18/18 10:26	05/28/18 12:13	1
13C4 PFOS	S for QSM (	Qualifier		DL	Unit	D	05/18/18 10:26  Prepared	05/28/18 12:13 Analyzed	1 Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA	S for QSM t	Qualifier	3-15 - DL		Unit ng/L	<u>D</u>	Prepared		Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	S for QSM (	Qualifier *	3-15 - DL LOQ	5.7		<u>D</u>	Prepared 05/18/18 10:26	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM 8 Result 23 55	Qualifier *	3-15 - DL LOQ 19	5.7 5.1	ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 20:07	10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM 8 Result 23 55	Qualifier  D *  D *  U M *	3-15 - DL LOQ 19	5.7 5.1 4.9	ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 20:07 05/29/18 20:07	Dil Fac 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM 8  Result  23  55  14	Qualifier  D *  D *  U M *  D *	3-15 - DL LOQ 19 19 19	5.7 5.1 4.9 4.3	ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	Dil Fac 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM 8  Result  23  55  14  27	Qualifier  D *  D *  U M *  D *  D *	3-15 - DL LOQ 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	Dil Fac 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM 8 Result 23 55 14 27	Qualifier  D *  D *  U M *  D *  D J K01	3-15 - DL LOQ 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07	Dil Fac 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM 8  Result  23  55  14  27  360  1100	Qualifier  D * D * U M * D * D J K01  Qualifier	3-15 - DL LOQ 19 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	Dil Fac 10 10 10 10 10 10 Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 8  Result  23  55  14  27  360  1100  %Recovery	Qualifier  D * D * U M * D * D J K01  Qualifier	19 19 19 19 38 <i>Limits</i>	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26	Analyzed  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07  05/29/18 20:07  Analyzed	Dil Fac 10 10 10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 8  Result  23  55  14  27  360  1100  %Recovery  69	Qualifier  D * D * U M * D * D J K01  Qualifier	19 19 19 19 19 38 Limits 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07  05/29/18 20:07  Analyzed  05/29/18 20:07	Dil Fac  10 10 10 10 10 10 10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM \$  Result  23  55  14  27  360  1100  %Recovery  69  79	Qualifier  D * D * U M * D * D J K01  Qualifier	19 19 19 19 38 Limits 50 - 150 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07  05/29/18 20:07  Analyzed  05/29/18 20:07 05/29/18 20:07	Dil Fac  10 10 10 10 10 10 10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM s Result 23 55 14 27 360 1100 %Recovery 69 79 92	Qualifier  D * D * U M * D * D J K01  Qualifier	19 19 19 19 38 Limits 50 - 150 50 - 150 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07  Analyzed  05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	Dil Fac 10 10 10 10

Client Sample ID: MW-KLA06-01-01

Lab Sample ID: 320-39023-7 Date Collected: 05/06/18 13:15 **Matrix: Water** 

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6100	E *	1.9	0.59	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorooctanoic acid (PFOA)	11000	EM	1.9	0.52	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorononanoic acid (PFNA)	500	EM	1.9	0.50	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorobutanesulfonic acid (PFBS)	1600	E	1.9	0.45	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorohexanesulfonic acid (PFHxS)	17000	EM	1.9	0.37	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorooctanesulfonic acid (PFOS)	57000	E	3.9	1.1	ng/L		05/18/18 10:26	05/28/18 12:29	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA06-01-01 Lab Sample ID: 320-39023-7

%Recovery Qualifier

Date Collected: 05/06/18 13:15 **Matrix: Water** 

Prepared

Analyzed

Dil Fac

Limits

Date Received: 05/08/18 09:00

Isotope Dilution

13C3-PFBS	233	Q		50 -	. 150				05/18/18 10:26	05/28/18 12:29	1
13C4-PFHpA	37	Q		50 -	. 150				05/18/18 10:26	05/28/18 12:29	1
13C4 PFOA	52			50 -	. 150				05/18/18 10:26	05/28/18 12:29	1
13C5 PFNA	50			50 -	150				05/18/18 10:26	05/28/18 12:29	1
1802 PFHxS	54			50 -	. 150				05/18/18 10:26	05/28/18 12:29	1
13C4 PFOS	36	Q		50 -	. 150				05/18/18 10:26	05/28/18 12:29	1
_ Method: EPA 537 (Mod) - PFAS	S for QSM 5	5.1, Ta	able B	-15 -	DL2						
Analyte	Result				LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5400	D	J K01		190	59	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorooctanoic acid (PFOA)	14000	D	J K01		190	52	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorononanoic acid (PFNA)	490	D	J K01		190	50	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorobutanesulfonic acid (PFBS)	7900	D	J K01		190	45	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorohexanesulfonic acid (PFHxS)	68000	E D	J K01	N03	190	37	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorooctanesulfonic acid	130000	E D	J G02 I	<b>&lt;</b> 01	390	110	ng/L		05/18/18 10:26	05/29/18 20:31	100
(PFOS)				N03							
Isotope Dilution	%Recovery	Qualit	fier	Lin	nits				Prepared	Analyzed	Dil Fac
13C3-PFBS	145	М		50 -	. 150				05/18/18 10:26	05/29/18 20:31	100
13C4-PFHpA	53			50 -	. 150				05/18/18 10:26	05/29/18 20:31	100
13C4 PFOA	58			50 -	. 150				05/18/18 10:26	05/29/18 20:31	100
13C5 PFNA	51			50 -	. 150				05/18/18 10:26	05/29/18 20:31	100
1802 PFHxS	76			50 -	. 150				05/18/18 10:26	05/29/18 20:31	100
13C4 PFOS	46	Q		50	. 150				05/18/18 10:26	05/29/18 20:31	100

Client Sample ID: KLA08-SW1-01

Lab Sample ID: 320-39023-8 Date Collected: 05/07/18 08:30 **Matrix: Water** 

Method: EPA 537 (Mod) - PFA Analyte	Result			LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	J M		1.9	0.58	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorooctanoic acid (PFOA)	1.8	J M	Ĵ	1.9	0.52	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorononanoic acid (PFNA)	0.95	J M	J	1.9	0.50	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorobutanesulfonic acid (PFBS)	0.96	UM	U	1.9	0.44	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorohexanesulfonic acid (PFHxS)	3.7	M	=	1.9	0.36	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorooctanesulfonic acid (PFOS)	28	M	=	3.8	1.1	ng/L		05/21/18 12:01	05/31/18 04:51	1
Isotope Dilution	%Recovery	Qual	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	76			50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C4-PFHpA	76			50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C4 PFOA	95			50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C5 PFNA	103			50 - 150				05/21/18 12:01	05/31/18 04:51	1
1802 PFHxS	93			50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C4 PFOS	101			50 - 150				05/21/18 12:01	05/31/18 04:51	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA-01-SB1-01

Lab Sample ID: 320-39023-9 Date Collected: 05/02/18 14:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.0

Analyte	Result	Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.38		0.38	0.098	ug/Kg	₩	05/14/18 13:10	05/29/18 03:32	1
Perfluorooctanoic acid (PFOA)	3.9		0.38	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 03:32	1
Perfluorononanoic acid (PFNA)	0.25	UM U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	05/29/18 03:32	1
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.50	0.074	ug/Kg	₿	05/14/18 13:10	05/29/18 03:32	1
Perfluorohexanesulfonic acid (PFHxS)	18		0.38	0.078	ug/Kg	₩	05/14/18 13:10	05/29/18 03:32	1
Perfluorooctanesulfonic acid (PFOS)	240	E *	1.3	0.30	ug/Kg	₽	05/14/18 13:10	05/29/18 03:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	74		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C4-PFHpA	82		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C4 PFOA	86		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C5 PFNA	60		50 - 150				05/14/18 13:10	05/29/18 03:32	1
1802 PFHxS	78		50 - 150				05/14/18 13:10	05/29/18 03:32	1
1802 PFHxS 13C4 PFOS	78 48	Q	50 - 150 50 - 150					05/29/18 03:32 05/29/18 03:32	-
13C4 PFOS Method: EPA 537 (Mod) - PFA	48 S for QSM !	5.1, Table	50 - 150 <b>B-15 - DL</b>	DL	Unit	D	05/14/18 13:10	05/29/18 03:32	1
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	48 S for QSM ( Result	5.1, Table   Qualifier	50 - 150 B-15 - DL LOQ		Unit ua/Ka	<b>D</b>	05/14/18 13:10 Prepared	05/29/18 03:32 Analyzed	1 Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	AS for QSM Sesult 5.0	5.1, Table   Qualifier U *	50 - 150  B-15 - DL  LOQ  7.5	2.0	ug/Kg		05/14/18 13:10  Prepared  05/14/18 13:10	05/29/18 03:32  Analyzed 05/29/18 11:07	Dil Fac
13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)	48 S for QSM ( Result 5.0 3.9	5.1, Table   Qualifier U *	50 - 150 B-15 - DL LOQ 7.5 7.5	2.0 2.5	ug/Kg ug/Kg	<del></del>	05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluoronoctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	48 S for QSM (  Result  5.0  3.9  5.0	5.1, Table   Qualifier U * U * U *	50 - 150  B-15 - DL  LOQ  7.5  7.5  7.5	2.0 2.5 2.0	ug/Kg ug/Kg ug/Kg	<del></del>	05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	48 S for QSM ( Result 5.0 3.9	5.1, Table   Qualifier   U * U * U *	50 - 150 B-15 - DL LOQ 7.5 7.5	2.0 2.5 2.0 1.5	ug/Kg ug/Kg	<del>\$</del> \$	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS)	48 S for QSM (  Result  5.0  3.9  5.0  4.5	Gualifier  U  J D M *  U  *  U  *  D  *	50 - 150 B-15 - DL LOQ 7.5 7.5 7.5 10 7.5	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	48 S for QSM (  Result  5.0  3.9  5.0  4.5  17	5.1, Table   Qualifier U * J D M * U * D * D J K	50 - 150 B-15 - DL LOQ 7.5 7.5 7.5 10 7.5	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	48 S for QSM (  Result  5.0  3.9  5.0  4.5  17	5.1, Table   Qualifier   U *	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	48 Result 5.0 3.9 5.0 4.5 17 430  %Recovery	5.1, Table   Qualifier   U *	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10	Analyzed  O5/29/18 03:32  Analyzed  O5/29/18 11:07  O5/29/18 11:07  O5/29/18 11:07  O5/29/18 11:07  O5/29/18 11:07  Analyzed	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	48 S for QSM 8 Result 5.0 3.9 5.0 4.5 17 430  **Recovery* 79	5.1, Table   Qualifier   U *	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 7.5 10 7.5 25  Limits 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07  Analyzed  05/29/18 11:07	Dil Face 200 200 200 200 200 200 200 200 200 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	48 Result 5.0 3.9 5.0 4.5 17 430  **Recovery 79 89	5.1, Table   Qualifier   U *	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits 50 - 150 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  Analyzed  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20 20 20 20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	48 Result 5.0 3.9 5.0 4.5 17 430  **Recovery 79 89 90	5.1, Table   Qualifier   U *	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits 50 - 150 50 - 150 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07  Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20 20 20 20 20 20 20 20 20 20 20 20

Client Sample ID: KLA-01-SB1-02

Date Collected: 05/02/18 14:10 **Matrix: Solid** Percent Solids: 77.4 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.32	J	0.38	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 03:40	1
Perfluorooctanoic acid (PFOA)	1.0		0.38	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 03:40	1
Perfluorononanoic acid (PFNA)	0.26	UM U	0.38	0.10	ug/Kg	₽	05/14/18 13:10	05/29/18 03:40	1
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.51	0.075	ug/Kg	\$	05/14/18 13:10	05/29/18 03:40	1
Perfluorohexanesulfonic acid (PFHxS)	9.1		0.38	0.079	ug/Kg	₽	05/14/18 13:10	05/29/18 03:40	1
Perfluorooctanesulfonic acid (PFOS)	150	E *	1.3	0.31	ug/Kg	☼	05/14/18 13:10	05/29/18 03:40	1

Lab Sample ID: 320-39023-10

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Isotope Dilution

12C2 DEBS

1802 PFHxS

13C4 PFOS

13C5 PFNA

1802 PFHxS

13C4 PFOS

Client Sample ID: KLA-01-SB1-02

Date Collected: 05/02/18 14:10 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.4

Limits

EO 1EO

13C3-PFBS	69			50 - 150				05/14/18 13:10	05/29/18 03:40	1
13C4-PFHpA	83			50 - 150				05/14/18 13:10	05/29/18 03:40	1
13C4 PFOA	82			50 - 150				05/14/18 13:10	05/29/18 03:40	1
13C5 PFNA	67			50 - 150				05/14/18 13:10	05/29/18 03:40	1
1802 PFHxS	75			50 - 150				05/14/18 13:10	05/29/18 03:40	1
13C4 PFOS	54			50 - 150				05/14/18 13:10	05/29/18 03:40	1
_ Method: EPA 537 (Mod) - PFAS	S for QSM	5.1, Ta	able B	-15 - DL						
Analyte	Result			LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.1	U *		7.7	2.0	ug/Kg	☼	05/14/18 13:10	05/29/18 11:15	20
Perfluorooctanoic acid (PFOA)	5.1	UM	*	7.7	2.6	ug/Kg	₩	05/14/18 13:10	05/29/18 11:15	20
Perfluorononanoic acid (PFNA)	5.1	U	*	7.7	2.1	ug/Kg	₽	05/14/18 13:10	05/29/18 11:15	20
Perfluorobutanesulfonic acid (PFBS)	4.6	UM	*	10	1.5	ug/Kg	\$	05/14/18 13:10	05/29/18 11:15	20
Perfluorohexanesulfonic acid (PFHxS)	9.1	D ,	*	7.7	1.6	ug/Kg	₩	05/14/18 13:10	05/29/18 11:15	20
Perfluorooctanesulfonic acid (PFOS)	210	D ,	J K01	26	6.1	ug/Kg	₩	05/14/18 13:10	05/29/18 11:15	20
Isotope Dilution	%Recovery	Quali	fier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71	М		50 - 150				05/14/18 13:10	05/29/18 11:15	20
13C4-PFHpA	78			50 - 150				05/14/18 13:10	05/29/18 11:15	20
•										
13C4 PFOA	89			50 - 150				05/14/18 13:10	05/29/18 11:15	20

50 - 150

50 - 150

Client Sample ID: KLA-01-SB2-01

Lab Sample ID: 320-39023-11 Date Collected: 05/02/18 13:15 Date Received: 05/09/18 09:20

70

63

92

71

72

%Recovery Qualifier

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 Analyzed Analyte Result Qualifier 100 DL Unit Prepared Dil Fac Perfluoroheptanoic acid (PFHpA) 0.22 U 0.34 0.088 ug/Kg 05/14/18 13:10 05/29/18 03:48 Perfluorooctanoic acid (PFOA) 0.30 J 0.34 0.11 ug/Kg 05/14/18 13:10 05/29/18 03:48 1 Perfluorononanoic acid (PFNA) 0.22 U 0.34 05/14/18 13:10 05/29/18 03:48 0.091 ug/Kg 1 05/14/18 13:10 05/29/18 03:48 Perfluorobutanesulfonic acid 0.072 J 0.45 0.066 ug/Kg 1 © 05/14/18 13:10 05/29/18 03:48 Perfluorohexanesulfonic acid 1.5 0.34 0.070 ug/Kg 1 (PFHxS) © 05/14/18 13:10 05/29/18 03:48 Perfluorooctanesulfonic acid 1.7 1.1 0.27 ug/Kg 1 (PFOS) Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 13C3-PFBS 68 50 - 150 05/14/18 13:10 05/29/18 03:48 1 13C4-PFHpA 84 50 - 150 05/14/18 13:10 05/29/18 03:48 1 13C4 PFOA 88 50 - 150 05/14/18 13:10 05/29/18 03:48 1

50 - 150

50 - 150

50 - 150

Lab Sample ID: 320-39023-10

05/14/19 12:10 05/20/19 02:40

05/14/18 13:10 05/29/18 11:15

05/14/18 13:10 05/29/18 11:15

05/14/18 13:10 05/29/18 03:48

05/14/18 13:10 05/29/18 03:48

05/14/18 13:10 05/29/18 03:48

20

20

1

1

Matrix: Solid

Percent Solids: 87.9

Analyzed

Prepared

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA-01-SB2-02 Lab Sample ID: 320-39023-12

 Date Collected: 05/02/18 13:20
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.14	J	0.39	0.10	ug/Kg	₽	05/14/18 13:10	05/29/18 03:56	1
Perfluorooctanoic acid (PFOA)	0.39		0.39	0.13	ug/Kg	☼	05/14/18 13:10	05/29/18 03:56	1
Perfluorononanoic acid (PFNA)	0.26	UM U	0.39	0.11	ug/Kg	☼	05/14/18 13:10	05/29/18 03:56	1
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.52	0.077	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 03:56	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.39	0.081	ug/Kg	₽	05/14/18 13:10	05/29/18 03:56	1
Perfluorooctanesulfonic acid (PFOS)	3.2	M =	1.3	0.31	ug/Kg	₩	05/14/18 13:10	05/29/18 03:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C5 PFNA	87		50 - 150				05/14/18 13:10	05/29/18 03:56	1
1802 PFHxS	76		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4 PFOS	74		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 03:56	1

Client Sample ID: KLA-01-SB3-01 Lab Sample ID: 320-39023-13

 Date Collected: 05/02/18 14:25
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 77.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.38	0.099	ug/Kg	<del>\</del>	05/14/18 13:10	05/29/18 04:04	1
Perfluorooctanoic acid (PFOA)	0.22	J	0.38	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 04:04	1
Perfluorononanoic acid (PFNA)	0.25	U M U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	05/29/18 04:04	1
Perfluorobutanesulfonic acid (PFBS)	0.13	J	0.51	0.075	ug/Kg	₽	05/14/18 13:10	05/29/18 04:04	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	U F06	0.38	0.079	ug/Kg	☼	05/14/18 13:10	05/29/18 04:04	1
Perfluorooctanesulfonic acid (PFOS)	10		1.3	0.30	ug/Kg	₽	05/14/18 13:10	05/29/18 04:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	67		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C4-PFHpA	82		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C5 PFNA	84		50 - 150				05/14/18 13:10	05/29/18 04:04	1
18O2 PFHxS	73		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 04:04	1

Client Sample ID: KLA-01-SB3-02 Lab Sample ID: 320-39023-14

50 - 150

Date Collected: 05/02/18 14:30 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 78.1

Method: EPA 537 (Mod) - PFAS	for QSM 5.1, Table B	B-15						
Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25 U	0.38	0.099	ug/Kg	<del>\</del>	05/14/18 13:10	05/29/18 04:12	1
Perfluorooctanoic acid (PFOA)	0.25 U	0.38	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 04:12	1
Perfluorononanoic acid (PFNA)	0.25 U	0.38	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:12	1
Perfluorobutanesulfonic acid (PFBS)	0.23 U	0.51	0.075	ug/Kg	₽	05/14/18 13:10	05/29/18 04:12	1

05/14/18 13:10 05/29/18 04:04

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA-01-SB3-02 Lab Sample ID: 320-39023-14

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	0.32	J	0.38	0.078	ug/Kg	<del></del>	05/14/18 13:10	05/29/18 04:12	1
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.3	0.30	ug/Kg	☼	05/14/18 13:10	05/29/18 04:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	67		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4-PFHpA	80		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4 PFOA	80		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C5 PFNA	82		50 - 150				05/14/18 13:10	05/29/18 04:12	1
1802 PFHxS	70		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4 PFOS	64		50 - 150				05/14/18 13:10	05/29/18 04:12	1

Client Sample ID: KLA02-SB1-01 Lab Sample ID: 320-39023-15

 Date Collected: 05/04/18 13:40
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 77.4

Analyte	Result	Qua	alifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.16	J		0.39	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Perfluorooctanoic acid (PFOA)	0.46	M	=	0.39	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Perfluorononanoic acid (PFNA)	0.26	U		0.39	0.11	ug/Kg	≎	05/14/18 14:03	05/29/18 07:43	1
Perfluorobutanesulfonic acid (PFBS)	0.25	J		0.52	0.077	ug/Kg	₽	05/14/18 14:03	05/29/18 07:43	1
Perfluorohexanesulfonic acid (PFHxS)	2.6			0.39	0.081	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Perfluorooctanesulfonic acid (PFOS)	7.6	J1	J H02	1.3	0.31	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Isotope Dilution	%Recovery	Qua	alifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	81			50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C4-PFHpA	93			50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C4 PFOA	93			50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C5 PFNA	100			50 - 150				05/14/18 14:03	05/29/18 07:43	1
1802 PFHxS	88			50 - 150				05/14/18 14:03	05/29/18 07:43	1

Client Sample ID: KLA02-SB1-02 Lab Sample ID: 320-39023-16

50 - 150

86

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 80.8

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.18	J	0.36	0.095	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorooctanoic acid (PFOA)	0.28	JM J	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorononanoic acid (PFNA)	0.24	U M U	0.36	0.098	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorobutanesulfonic acid (PFBS)	0.22	J	0.49	0.072	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorohexanesulfonic acid (PFHxS)	1.6		0.36	0.075	ug/Kg	₽	05/14/18 14:03	05/29/18 08:07	1
Perfluorooctanesulfonic acid (PFOS)	6.1		1.2	0.29	ug/Kg	☼	05/14/18 14:03	05/29/18 08:07	1

05/14/18 14:03 05/29/18 07:43

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB1-02

Lab Sample ID: 320-39023-16 Date Collected: 05/04/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 80.8

Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	71	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4-PFHpA	81	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4 PFOA	84	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C5 PFNA	85	50 - 150	05/14/18 14:03	05/29/18 08:07	1
1802 PFHxS	77	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4 PFOS	76	50 - 150	05/14/18 14:03	05/29/18 08:07	1

Client Sample ID: KLA02-SB2-01 Lab Sample ID: 320-39023-17

Date Collected: 05/04/18 13:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.0

Pate Received: 05/09/18 09:20									Percent Solid	3. 7 J.
Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result			15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	1.1			0.37	0.097	ug/Kg	₩	05/14/18 14:03	05/29/18 08:14	
Perfluorooctanoic acid (PFOA)	2.2			0.37	0.12	ug/Kg	☼	05/14/18 14:03	05/29/18 08:14	
Perfluorononanoic acid (PFNA)	0.38			0.37	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 08:14	
Perfluorobutanesulfonic acid (PFBS)	5.1			0.50	0.074	ug/Kg	<b>\$</b>	05/14/18 14:03	05/29/18 08:14	
Perfluorohexanesulfonic acid (PFHxS)	21			0.37	0.077	ug/Kg	₽	05/14/18 14:03	05/29/18 08:14	•
Perfluorooctanesulfonic acid (PFOS)	270	Е	*	1.2	0.30	ug/Kg	₩	05/14/18 14:03	05/29/18 08:14	•
Isotope Dilution	%Recovery	Qual	lifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	78	-		50 - 150				05/14/18 14:03	05/29/18 08:14	
13C4-PFHpA	85			50 - 150				05/14/18 14:03	05/29/18 08:14	
13C4 PFOA	94			50 - 150				05/14/18 14:03	05/29/18 08:14	
13C5 PFNA	66			50 - 150				05/14/18 14:03	05/29/18 08:14	
1802 PFHxS	78			50 - 150				05/14/18 14:03	05/29/18 08:14	
13C4 PFOS	55			50 - 150				05/14/18 14:03	05/29/18 08:14	
Method: EPA 537 (Mod) - PFA Analyte	S for QSM (			15 - DL LOQ	DI	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	25			LOQ	DL		U	•	-	DII Fat
		11	*	37	0.7	ua/Ka	<del></del>	05/14/18 14:03	05/20/18 15:02	100
Porfluoroactanoic acid (PEOA)			*	37		ug/Kg	<u>∓</u>	05/14/18 14:03		100
	25	U	*	37	12	ug/Kg	₩	05/14/18 14:03	05/29/18 15:02	100
Perfluorononanoic acid (PFNA)	25 25	U U	*	37 37	12 10	ug/Kg ug/Kg		05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02	100 100
Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS)	25 25 22	U U	*	37 37 50	12 10 7.4	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS)	25 25 22 <b>21</b>	U U U <b>J D</b>	* * *	37 37 50 37	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	25 25 22	U U U <b>J D</b>	*	37 37 50	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	25 25 22 21 390 %Recovery	U U J D D	* * * * * J K01	37 37 50 37	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	25 25 22 21 390 %Recovery	U U J D D	* * * * * J K01	37 37 50 37 120	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <i>Prepared</i>	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	25 25 22 21 390 %Recovery	U U J D D	* * * * * J K01	37 37 50 37 120	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 Analyzed	100 100 100 100 100 <b>Dil Fa</b>
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	25 25 22 21 390 %Recovery	U U J D D	* * * * * J K01	37 37 50 37 120 <b>Limits</b> 50 - 150	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 Analyzed 05/29/18 15:02	100 100 100 100 100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	25 25 22 <b>21</b> <b>390</b> <i>%Recovery</i> 94 72	U U J D D	* * * * * J K01	37 37 50 37 120 <b>Limits</b> 50 - 150 50 - 150	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 Analyzed 05/29/18 15:02 05/29/18 15:02	100 100 100 100 100 100 100 100
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	25 25 22 <b>21</b> <b>390</b> <b>%Recovery</b> 94 72 87	U U J D D	* * * * * J K01	37 37 50 37 120 <b>Limits</b> 50 - 150 50 - 150 50 - 150	12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02 Analyzed 05/29/18 15:02 05/29/18 15:02 05/29/18 15:02	100 100 100 100 100

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB2-02

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: 320-39023-18 Date Collected: 05/04/18 13:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 59.2

Analyte	Result	Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.0		0.51	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 08:22	1
Perfluorooctanoic acid (PFOA)	18		0.51	0.17	ug/Kg	☼	05/14/18 14:03	05/29/18 08:22	1
Perfluorononanoic acid (PFNA)	0.30	J	0.51	0.14	ug/Kg	₽	05/14/18 14:03	05/29/18 08:22	1
Perfluorobutanesulfonic acid (PFBS)	26		0.68	0.10	ug/Kg	<b>\$</b>	05/14/18 14:03	05/29/18 08:22	1
Perfluorohexanesulfonic acid (PFHxS)	110	E *	0.51	0.10	ug/Kg	₽	05/14/18 14:03	05/29/18 08:22	1
Perfluorooctanesulfonic acid (PFOS)	410	E *	1.7	0.41	ug/Kg	≎	05/14/18 14:03	05/29/18 08:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	82		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C4-PFHpA	78		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C4 PFOA	89		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C5 PFNA	71		50 - 150				05/14/18 14:03	05/29/18 08:22	1
1802 PFHxS	72		50 - 150				05/14/18 14:03	05/29/18 08:22	1
100 / 0500	60		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 08:22	1
13C4 PFOS : Method: EPA 537 (Mod) - PFA		5.1, Table I							
Method: EPA 537 (Mod) - PFA Analyte	S for QSM &	Qualifier	3-15 - DL LOQ		Unit	D	Prepared	Analyzed	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	Qualifier  J D *	B-15 - DL LOQ 10	2.6	ug/Kg	D	Prepared 05/14/18 14:03	Analyzed 05/29/18 17:07	20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result 6.4	Qualifier  J D *  D *	3-15 - DL LOQ 10	2.6 3.4	ug/Kg ug/Kg		Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07	20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	Qualifier  J D *  D *	3-15 - DL LOQ 10 10	2.6 3.4 2.7	ug/Kg ug/Kg ug/Kg		Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07	20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result 6.4	Qualifier  J D *  D *  U *	3-15 - DL LOQ 10	2.6 3.4 2.7	ug/Kg ug/Kg		Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM 8  Result  6.4  17  6.8	Qualifier J D * D * U * D *	3-15 - DL LOQ 10 10 10	2.6 3.4 2.7 2.0	ug/Kg ug/Kg ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM 8  Result  6.4  17  6.8  30  130	Qualifier J D * D * U * D *	3-15 - DL LOQ 10 10 10 14	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM 8  Result  6.4  17  6.8  30  130	Qualifier JD * D * U * D * D JK0 DM JK0	3-15 - DL LOQ 10 10 10 14	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM 8  Result  6.4  17  6.8  30  130  570	Qualifier JD * D * U * D * D JK0 DM JK0	3-15 - DL LOQ 10 10 10 14 1 1 10	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 8  Result  6.4  17  6.8  30  130  570  %Recovery	Qualifier JD * D * U * D * D JK0 DM JK0	3-15 - DL LOQ 10 10 10 14 1 1 10 21 34 Limits	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed	20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	S for QSM 8  Result  6.4  17  6.8  30  130  570  %Recovery	Qualifier JD * D * U * D * D JK0 DM JK0	3-15 - DL LOQ 10 10 10 14 1 10 11 34 Limits 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07	20 20 20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM \$  Result  6.4  17  6.8  30  130  570  %Recovery  71  78	Qualifier JD * D * U * D * D JK0 DM JK0	3-15 - DL LOQ 10 10 10 14 1 10 11 34 Limits 50 - 150 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07  05/29/18 17:07	20 20 20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM 8 Result 6.4 17 6.8 30 130 570  **Recovery 71 78 91	Qualifier JD * D * U * D * D JK0 DM JK0	10 10 14 10 10 34 Limits 50 - 150 50 - 150 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20

Client Sample ID: KLA02-SB3-01 Lab Sample ID: 320-39023-19

Date Collected: 05/04/18 13:55 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 83.8

Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.47	0.36	0.094	ug/Kg	₩	05/14/18 14:03	05/29/18 08:30	1
Perfluorooctanoic acid (PFOA)	0.45	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 08:30	1
Perfluorononanoic acid (PFNA)	0.40	0.36	0.098	ug/Kg	☼	05/14/18 14:03	05/29/18 08:30	1
Perfluorobutanesulfonic acid (PFBS)	0.50	0.48	0.071	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1
Perfluorohexanesulfonic acid (PFHxS)	5.4	0.36	0.075	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1
Perfluorooctanesulfonic acid (PFOS)	110 EM *	1.2	0.29	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Isotope Dilution

Client Sam	ple ID:	KLA02-5	SB3-01
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Date Collected: 05/04/18 13:55 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 83.8

Limits

%Recovery Qualifier

130tope Dilution	/orvecovery	Qua	IIIICI	Lillits				rrepareu	Allalyzeu	Diriac
13C3-PFBS	78			50 - 150				05/14/18 14:03	05/29/18 08:30	1
13C4-PFHpA	86			50 - 150				05/14/18 14:03	05/29/18 08:30	1
13C4 PFOA	92			50 - 150				05/14/18 14:03	05/29/18 08:30	1
13C5 PFNA	85			50 - 150				05/14/18 14:03	05/29/18 08:30	1
1802 PFHxS	82			50 - 150				05/14/18 14:03	05/29/18 08:30	1
13C4 PFOS	68			50 - 150				05/14/18 14:03	05/29/18 08:30	1
_ Method: EPA 537 (Mod) - PFA	S for QSM	5.1, <sup>-</sup>	Гable В	-15 - DL						
Analyte	Result			LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.8	U	*	7.2	1.9	ug/Kg	☼	05/14/18 14:03	05/29/18 14:30	20
Perfluorooctanoic acid (PFOA)	4.8	U	*	7.2	2.4	ug/Kg	☼	05/14/18 14:03	05/29/18 14:30	20
Perfluorononanoic acid (PFNA)	4.8	U	*	7.2	2.0	ug/Kg	☼	05/14/18 14:03	05/29/18 14:30	20
Perfluorobutanesulfonic acid (PFBS)	4.3	U	*	9.6	1.4	ug/Kg		05/14/18 14:03	05/29/18 14:30	20
Perfluorohexanesulfonic acid (PFHxS)	5.7	J D	*	7.2	1.5	ug/Kg	₽	05/14/18 14:03	05/29/18 14:30	20
Perfluorooctanesulfonic acid (PFOS)	140	D	J K01	24	5.8	ug/Kg	₩	05/14/18 14:03	05/29/18 14:30	20
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	77	М		50 - 150				05/14/18 14:03	05/29/18 14:30	20
13C4-PFHpA	84			50 - 150				05/14/18 14:03	05/29/18 14:30	20
13C4 PFOA	91			50 - 150				05/14/18 14:03	05/29/18 14:30	20
13C5 PFNA	100			50 - 150				05/14/18 14:03	05/29/18 14:30	20
1802 PFHxS	75			50 - 150				05/14/18 14:03	05/29/18 14:30	20
13C4 PFOS	74			50 - 150				05/14/18 14:03	05/29/18 14:30	20
_										

Client Sample ID: KLA02-SB3-02

Date Collected: 05/04/18 14:00

Lab Sample ID: 320-39023-20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 72.4

date Received. 05/03/16 03.20								Percent Sono	15. 12.4
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table I Qualifier	B-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.81		0.41	0.11	ug/Kg	<u> </u>	05/14/18 14:03	05/29/18 08:38	1
Perfluorooctanoic acid (PFOA)	1.0		0.41	0.14	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorononanoic acid (PFNA)	0.12	JM J	0.41	0.11	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorobutanesulfonic acid (PFBS)	1.8		0.55	0.081	ug/Kg	☼	05/14/18 14:03	05/29/18 08:38	1
Perfluorohexanesulfonic acid (PFHxS)	9.4		0.41	0.086	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorooctanesulfonic acid (PFOS)	21	M =	1.4	0.33	ug/Kg	₽	05/14/18 14:03	05/29/18 08:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4-PFHpA	80		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4 PFOA	90		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C5 PFNA	92		50 - 150				05/14/18 14:03	05/29/18 08:38	1
1802 PFHxS	80		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4 PFOS	76		50 - 150				05/14/18 14:03	05/29/18 08:38	1

Lab Sample ID: 320-39023-19

Analyzed

Prepared

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA03-SB1-01 Lab Sample ID: 320-39023-21

Date Collected: 05/01/18 09:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.39	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorooctanoic acid (PFOA)	0.26	UMU	0.39	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorononanoic acid (PFNA)	0.26	U	0.39	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorobutanesulfonic acid (PFBS)	0.082	J	0.52	0.076	ug/Kg	☼	05/14/18 13:10	05/29/18 04:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.99		0.39	0.080	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorooctanesulfonic acid (PFOS)	3.0		1.3	0.31	ug/Kg	☼	05/14/18 13:10	05/29/18 04:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4 PFOA	85		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C5 PFNA	83		50 - 150				05/14/18 13:10	05/29/18 04:19	1
1802 PFHxS	71		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4 PFOS	69		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 04:19	1

Lab Sample ID: 320-39023-22 Client Sample ID: KLA03-SB1-02

Date Collected: 05/01/18 09:05 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 74.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.40	0.10	ug/Kg	<del>\</del>	05/14/18 13:10	05/29/18 04:27	1
Perfluorooctanoic acid (PFOA)	0.22	JM J	0.40	0.13	ug/Kg	☼	05/14/18 13:10	05/29/18 04:27	1
Perfluorononanoic acid (PFNA)	0.26	U	0.40	0.11	ug/Kg	☼	05/14/18 13:10	05/29/18 04:27	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.53	0.078	ug/Kg	₽	05/14/18 13:10	05/29/18 04:27	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.40	0.082	ug/Kg	₽	05/14/18 13:10	05/29/18 04:27	1
Perfluorooctanesulfonic acid (PFOS)	17		1.3	0.32	ug/Kg	₽	05/14/18 13:10	05/29/18 04:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C4 PFOA	87		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C5 PFNA	91		50 - 150				05/14/18 13:10	05/29/18 04:27	1
18O2 PFHxS	74		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 04:27	1

Client Sample ID: KLA03-SB2-01 Lab Sample ID: 320-39023-23

50 - 150

71

Date Collected: 05/02/18 12:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 81.0

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.37	0.096	ug/Kg	₩	05/14/18 13:10	06/06/18 22:47	1
Perfluorooctanoic acid (PFOA)	0.15	J	0.37	0.12	ug/Kg	₽	05/14/18 13:10	06/06/18 22:47	1
Perfluorononanoic acid (PFNA)	0.25	U M U	0.37	0.099	ug/Kg	₽	05/14/18 13:10	06/06/18 22:47	1
Perfluorobutanesulfonic acid (PFBS)	0.10	J	0.49	0.072	ug/Kg	₽	05/14/18 13:10	06/06/18 22:47	1

05/14/18 13:10 05/29/18 04:27

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA03-SB2-01

Lab Sample ID: 320-39023-23 Date Collected: 05/02/18 12:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 81.0

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.37	0.076	ug/Kg	<del></del>	05/14/18 13:10	06/06/18 22:47	1
Perfluorooctanesulfonic acid (PFOS)	3.4		1.2	0.29	ug/Kg	☼	05/14/18 13:10	06/06/18 22:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	69		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4 PFOA	83		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C5 PFNA	81		50 - 150				05/14/18 13:10	06/06/18 22:47	1
1802 PFHxS	73		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4 PFOS	72		50 - 150				05/14/18 13:10	06/06/18 22:47	1

Client Sample ID: KLA03-SB2-02 Lab Sample ID: 320-39023-24

Date Collected: 05/02/18 12:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.2

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.38	0.10	ug/Kg	₩	05/14/18 13:10	06/06/18 22:55	1
Perfluorooctanoic acid (PFOA)	0.15	J	0.38	0.13	ug/Kg	☼	05/14/18 13:10	06/06/18 22:55	1
Perfluorononanoic acid (PFNA)	0.26	U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	06/06/18 22:55	1
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.51	0.075	ug/Kg	₽	05/14/18 13:10	06/06/18 22:55	1
Perfluorohexanesulfonic acid (PFHxS)	1.1		0.38	0.079	ug/Kg	₽	05/14/18 13:10	06/06/18 22:55	1
Perfluorooctanesulfonic acid (PFOS)	4.9	M =	1.3	0.31	ug/Kg	₽	05/14/18 13:10	06/06/18 22:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C4 PFOA	82		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C5 PFNA	78		50 - 150				05/14/18 13:10	06/06/18 22:55	1
1802 PFHxS	75		50 - 150				05/14/18 13:10	06/06/18 22:55	1

Client Sample ID: KLA03-SB3-01 Lab Sample ID: 320-39023-25

50 - 150

70

Date Collected: 05/01/18 08:45 **Matrix: Solid** Percent Solids: 74.9 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.36	J	0.41	0.11	ug/Kg	<del>\</del>	05/14/18 13:10	06/06/18 23:03	1
Perfluorooctanoic acid (PFOA)	0.37	J	0.41	0.14	ug/Kg	₩	05/14/18 13:10	06/06/18 23:03	1
Perfluorononanoic acid (PFNA)	0.27	U M U	0.41	0.11	ug/Kg	₩	05/14/18 13:10	06/06/18 23:03	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.54	0.080	ug/Kg	₩	05/14/18 13:10	06/06/18 23:03	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		0.41	0.084	ug/Kg	₽	05/14/18 13:10	06/06/18 23:03	1
Perfluorooctanesulfonic acid (PFOS)	3.2		1.4	0.32	ug/Kg	₩	05/14/18 13:10	06/06/18 23:03	1

05/14/18 13:10 06/06/18 22:55

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

1802 PFHxS

13C4 PFOS

Client Sample ID: KLA03-SB3-01 Lab Sample ID: 320-39023-25

 Date Collected: 05/01/18 08:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 74.9

Isotope Dilution	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	78	50 - 150	05/14/18 13:10	06/06/18 23:03	1
13C4-PFHpA	85	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C4 PFOA	85	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C5 PFNA	87	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
1802 PFHxS	83	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C4 PFOS	79	50 - 150	05/14/18 13:10	06/06/18 23:03	1

Client Sample ID: KLA03-SB3-02 Lab Sample ID: 320-39023-26

Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.59		0.41	0.11	ug/Kg	₩	05/14/18 13:10	06/06/18 23:10	1
Perfluorooctanoic acid (PFOA)	1.3		0.41	0.14	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Perfluorononanoic acid (PFNA)	0.27	U	0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Perfluorobutanesulfonic acid (PFBS)	0.75		0.54	0.080	ug/Kg	₿	05/14/18 13:10	06/06/18 23:10	1
Perfluorohexanesulfonic acid (PFHxS)	12		0.41	0.084	ug/Kg	₽	05/14/18 13:10	06/06/18 23:10	1
Perfluorooctanesulfonic acid (PFOS)	14	M =	1.4	0.32	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	77		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C4-PFHpA	85		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C5 PFNA	83		50 - 150				05/14/18 13:10	06/06/18 23:10	1

Client Sample ID: KLA04-SB1-01 Lab Sample ID: 320-39023-27

50 - 150

50 - 150

79

76

 Date Collected: 05/04/18 08:35
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 72.6

7410 TCCCTTC4. 00/00/10 00.20								i crociii oona	3. 7 <b>2</b> .0
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table B- Qualifier	-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.66		0.42	0.11	ug/Kg	<u></u>	05/14/18 14:03	05/29/18 08:54	1
Perfluorooctanoic acid (PFOA)	3.2		0.42	0.14	ug/Kg	☼	05/14/18 14:03	05/29/18 08:54	1
Perfluorononanoic acid (PFNA)	0.16	<b>J M</b> J G02	0.42	0.11	ug/Kg	₩	05/14/18 14:03	05/29/18 08:54	1
Perfluorobutanesulfonic acid (PFBS)	0.45	J	0.56	0.082	ug/Kg	☼	05/14/18 14:03	05/29/18 08:54	1
Perfluorohexanesulfonic acid (PFHxS)	24		0.42	0.086	ug/Kg	₩	05/14/18 14:03	05/29/18 08:54	1
Perfluorooctanesulfonic acid (PFOS)	930	E *	1.4	0.33	ug/Kg	₩	05/14/18 14:03	05/29/18 08:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	87		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4-PFHpA	98		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4 PFOA	88		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C5 PFNA	37	Q	50 - 150				05/14/18 14:03	05/29/18 08:54	1
1802 PFHxS	87		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4 PFOS	30	Q	50 - 150				05/14/18 14:03	05/29/18 08:54	1

TestAmerica Sacramento

05/14/18 13:10 06/06/18 23:10

05/14/18 13:10 06/06/18 23:10

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Analyte	Result	Qual	ifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	28	U	*	42	11	ug/Kg	- ☆	05/14/18 14:03	05/29/18 15:33	100
Perfluorooctanoic acid (PFOA)	28	U M	*	42	14	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorononanoic acid (PFNA)	28	U	*	42	11	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorobutanesulfonic acid (PFBS)	25	U	*	56	8.2	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorohexanesulfonic acid (PFHxS)	23	J D	*	42	8.6	ug/Kg	☼	05/14/18 14:03	05/29/18 15:33	100
Perfluorooctanesulfonic acid (PFOS)	2200	D	J K01	140	33	ug/Kg	₽	05/14/18 14:03	05/29/18 15:33	100
Isotope Dilution	%Recovery	Qual	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	99	M		50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4-PFHpA	77			50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4 PFOA	93			50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C5 PFNA	79			50 - 150				05/14/18 14:03	05/29/18 15:33	100
1802 PFHxS	67			50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4 PFOS	70			50 - 150				05/14/18 14:03	05/29/18 15:33	100

Client Sample ID: KLA04-SB1-02 Lab Sample ID: 320-39023-28

Date Collected: 05/04/18 08:40 Date Received: 05/09/18 09:20										Matrix Percent Solid	: Solid ls: 77.2
Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result			B-15	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.4				0.39	0.10	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 09:02	1
Perfluorooctanoic acid (PFOA)	19				0.39	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 09:02	1
Perfluorononanoic acid (PFNA)	0.60	M	<sub>=</sub> J	G02	0.39	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 09:02	1
Perfluorobutanesulfonic acid (PFBS)	14				0.52	0.077	ug/Kg	<b>\$</b>	05/14/18 14:03	05/29/18 09:02	1
Perfluorohexanesulfonic acid (PFHxS)	130	E	*		0.39	0.081	ug/Kg	₽	05/14/18 14:03	05/29/18 09:02	1
Perfluorooctanesulfonic acid (PFOS)	1800	EM	*		1.3	0.31	ug/Kg	₽	05/14/18 14:03	05/29/18 09:02	1
Isotope Dilution	%Recovery	Qua	lifier	Lin	nits				Prepared	Analyzed	Dil Fac
13C3-PFBS	95			50	- 150				05/14/18 14:03	05/29/18 09:02	1
13C4-PFHpA	85			50	- 150				05/14/18 14:03	05/29/18 09:02	1
13C4 PFOA	84			50	- 150				05/14/18 14:03	05/29/18 09:02	1
13C5 PFNA	34	Q		50	- 150				05/14/18 14:03	05/29/18 09:02	1
1802 PFHxS	78			50	- 150				05/14/18 14:03	05/29/18 09:02	1
13C4 PFOS	26	Q		50	- 150				05/14/18 14:03	05/29/18 09:02	1
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1, <sup>-</sup>	Table	B-15	- DL						
Analyte	Result				LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.0	J D	*		7.8	2.0	ug/Kg	₽	05/14/18 14:03	05/29/18 17:15	20
Perfluorooctanoic acid (PFOA)	19	D	*		7.8	2.6	ug/Kg	₩	05/14/18 14:03	05/29/18 17:15	20
Perfluorononanoic acid (PFNA)	5.2	U	*		7.8	2.1	ug/Kg	☼	05/14/18 14:03	05/29/18 17:15	20
Perfluorobutanesulfonic acid (PFBS)	15	D	*		10	1.5	ug/Kg	₽	05/14/18 14:03	05/29/18 17:15	20
Perfluorohexanesulfonic acid (PFHxS)	190	D	J K0	1	7.8	1.6	ug/Kg	₽	05/14/18 14:03	05/29/18 17:15	20
Perfluorooctanesulfonic acid (PFOS)	2900	E D	*		26	6.3	ug/Kg	☼	05/14/18 14:03	05/29/18 17:15	20
Isotope Dilution	%Recovery	Qua	lifier	Lin	nits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70	M		50	- 150				05/14/18 14:03	05/29/18 17:15	20
13C4-PFHpA	84			50	- 150				05/14/18 14:03	05/29/18 17:15	20
13C4 PFOA	84								05/44/40 44:00	05/00/40 47:45	20
1304110A	84			50	- 150				05/14/18 14:03	05/29/18 17:15	20

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple ID:	KLA04-9	SB1-02
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Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

Date Collected: 05/04/18 08:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.2

	/letnod: EPA 537 (Wod) - PFA										
Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL			Qualifi	er	Limits				Prepared	Analyzed	Dil Fa
Mothod: EPA 537 (Mod) - PFAS for OSM 5.1, Table B-15 - DL2   Result   Qualifier   LOQ   DL   Unit   D   Prepared   Analyzed   Dill   Unit   D   Prepared   Dill   Unit   D   D   D   Unit   D   D   D   D   D   D   D   D   D											2
Result   Caufifier   LOQ   DL   Unit   D   Prepared   Analyzed   Differention   Preflucione patient of (PFIpA)   26 U	3C4 PFOS	59			50 - 150				05/14/18 14:03	05/29/18 17:15	2
Perfluoronceptanoic acid (PFHpA)	Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Ta	ole B-	-15 - DL2						
Perfluoronoctanole acid (PFOA)	nalyte	Result	Qualifi	er	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluorononancia caid (PFNA) 26 U 39 11 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorobutanesulfonic acid 10 J D 52 7.7 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorobutanesulfonic acid 160 D 39 8.1 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorotexanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluoroctanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluoroctanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 05/14/18 14.03 05/22/18 15	erfluoroheptanoic acid (PFHpA)	26	U	*	39	10	ug/Kg	₩	05/14/18 14:03	05/29/18 15:41	10
Perfluorononancia caid (PFNA) 26 U 39 11 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorobutanesulfonic acid 10 J D 52 7.7 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorobutanesulfonic acid 160 D 39 8.1 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluorotexanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluoroctanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 Perfluoroctanesulfonic acid 3600 E D M J K01, N0f80 31 ug/Kg 0 05/14/18 14.03 05/22/18 15.41 05/14/18 14.03 05/22/18 15	Perfluorooctanoic acid (PFOA)	17	J D	*	39	13	ug/Kg	≎	05/14/18 14:03	05/29/18 15:41	10
PFBS    Perfluorobexanesulfonic acid   160 D	Perfluorononanoic acid (PFNA)	26	U	*	39	11	ug/Kg	⇔	05/14/18 14:03	05/29/18 15:41	10
Perfluorontexanesulfonic acid   160 D * 39	Perfluorobutanesulfonic acid	10	JD	*	52		0 0	Φ.	05/14/18 14:03	05/29/18 15:41	10
Perflucroctanesulfonic acid   PFPOS   PFPOS   Perflucroctanesulfonic acid   PFPOS   PERFLORM   PERFLOR	Perfluorohexanesulfonic acid	160	D	*	39	8.1	ug/Kg	₩	05/14/18 14:03	05/29/18 15:41	10
	Perfluorooctanesulfonic acid	3600	EDM	J K	01 , <b>N0</b> \$30	31	ug/Kg	₩	05/14/18 14:03	05/29/18 15:41	1
13G3.PFBS	,	%Recovery	Qualifi	er	Limits				Prepared	Analvzed	Dil F
13C4-PFHpA	<u>'</u>								•	•	1
1305 PFNA											1
1802 PFNA	•										1
Rocy PFHxS   76   50 - 150   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:41   05/14/18 14:03   05/29/18 15:49   05/14/18											
Ilient Sample ID: KLA04-SB2-01   Lab Sample ID: 320-39023-   Matrix: So Percent Solids: 7th											1
Lab Sample ID: KLA04-SB2-01   Matrix: So Percent Solids: 74   Matrix: Solids	0U2 FFRX3										
### Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20    Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15		03			50 - 150				05/14/18 14:03	05/29/18 15:41	1
Perfluoroheptanoic acid (PFHpA)  14  0.38  0.10  0.10  0.17  0.14  1.0  0.18  0.10  0.17  0.14  0.18  0.11  0.18	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20	SB2-01						La	•	Matrix	c: Sol
Perfluorooctanoic acid (PFOA) 27 E * 0.38 0.13 ug/kg	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA	S for QSM !								Matrix Percent Solic	c: Sol ls: 78
Perfluorononanoic acid (PFNA)  1.6 M	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA malyte	S for QSM !			LOQ			D	Prepared	Matrix Percent Solic Analyzed	c: Sol ls: 78
Perfluorobutanesulfonic acid PPFBS) Perfluorohexanesulfonic acid PPFBS) Perfluorohexanesulfonic acid PPFBS) Perfluoroctanesulfonic acid PPFBS) Perfluoroctanesulfonic acid PPFBS) Perfluoroctanesulfonic acid PPFBS) Perfluoroctanesulfonic acid PPFBS Perfluoroctanesulfonic acid PPFBS Perfluoroctanesulfonic acid PPFBS PPFOS) Perfluoroctanesulfonic acid PPFBS PPFOS PPFO	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA chalyte Perfluoroheptanoic acid (PFHpA)	S for QSM S	Qualific		LOQ 0.38	0.10	ug/Kg	<b>D</b>	Prepared 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09	c: Sol ls: 78
PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFFXS) Perfluorooctanesulfonic acid PFFXS) Perfluorooctanesulfonic acid PFOS) Perfluorooctanesulfonic acid PFOS) Perfluorooctanesulfonic acid PFOS) PFOS) PFOS) PFOS PFOS PFOS PFOS PFOS PFOS PFOS PFOS	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM S	Qualific		0.38 0.38	0.10 0.13	ug/Kg ug/Kg	<b>D</b>	Prepared 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09	c: Sol ls: 78
PFHxS)         Perfluorooctanesulfonic acid         2600 E         *         1.3         0.31 ug/Kg         *         05/14/18 14:03         05/29/18 09:09           PFOS)         Sotope Dilution         %Recovery         Qualifier         Limits         Prepared         Analyzed         Dil Mark           /3C3-PFBS         96         50 - 150         05/14/18 14:03         05/29/18 09:09<	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result 14 27	Qualific E *	er _	0.38 0.38	0.10 0.13	ug/Kg ug/Kg	D \$\frac{\pi}{\pi}\$	Prepared 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09	c: Sol ls: 78
Procest	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA)	S for QSM (  Result  14  27  1.6	Qualific E *	er _	0.38 0.38 0.38 0.38 0.51	0.10 0.13 0.10 0.075	ug/Kg ug/Kg ug/Kg ug/Kg	D \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol ls: 78
3C3-PFBS   96   50 - 150   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 09:09   05/14/18 14:03   05/29/18 15:49   05/14/18 14	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorohexanesulfonic acid (PFNS)	S for QSM (  Result  14  27  1.6  24	E * M E *	er _	0.38 0.38 0.38 0.51 0.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol ls: 78
3C4-PFHpA	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM (Result 14 27 1.6 24 140 2600	E * M E * E *	J G0	0.38 0.38 0.38 0.51 0.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol ls: 78
3C4 PFOA 83 50 - 150 05/14/18 14:03 05/29/18 09:09 3C5 PFNA 25 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 802 PFHxS 86 50 - 150 05/14/18 14:03 05/29/18 09:09 3C4 PFOS 18 Q 50 - 150 05/14/18 14:03 05/29/18 09:09  Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL Analyte Result Qualifier LOQ DL Unit D Prepared Analyzed Dil I Perfluoroheptanoic acid (PFHpA) 14 J D * 38 10 ug/Kg 05/14/18 14:03 05/29/18 15:49  Perfluorooctanoic acid (PFOA) 26 J D M J K01 38 13 ug/Kg 05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM s Result 14 27 1.6 24 140 2600 %Recovery	E * M E * E *	J G0	0.38 0.38 0.38 0.51 0.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  05/29/18 09:09	c: Sol
3C5 PFNA       25 Q       50 - 150       05/14/18 14:03 05/29/18 09:09         8O2 PFHxS       86 50 - 150       05/14/18 14:03 05/29/18 09:09         3C4 PFOS       18 Q 50 - 150       05/14/18 14:03 05/29/18 09:09         Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL         Inalyte       Result Qualifier       LOQ       DL Unit       D       Prepared       Analyzed       Dil I         Perfluoroheptanoic acid (PFHpA)       14 J D *       38       10 ug/Kg       05/14/18 14:03 05/29/18 15:49         Perfluorooctanoic acid (PFOA)       26 J D M J K01       38       13 ug/Kg       05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM s Result 14 27 1.6 24 140 2600 %Recovery	E * M E * E *	J G0	0.38 0.38 0.38 0.51 0.38 1.3	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  4nalyzed  05/29/18 09:09	c: Sol
802 PFHxS 86 50 - 150 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid PFBS) Perfluorobexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFHxS) Perfluorobexanesulfonic acid PFOS) Perfluorobexanesulfonic acid PFOS) Perfluorobexanesulfonic acid PFOS) Perfluorobexanesulfonic acid PFOS)	S for QSM 9 Result 14 27 1.6 24 140 2600 %Recovery	E * M E * E *	J G0	0.38 0.38 0.51 0.38 0.51 0.38 0.51 0.38 50.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  4nalyzed  05/29/18 09:09	c: Solls: 78
Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL analyte     Result Qualifier     LOQ DL Unit     D Prepared     Analyzed Dil Usion Distriction       Perfluoroheptanoic acid (PFHpA)     14 J D * 38 10 ug/Kg     38 10 ug/Kg     05/14/18 14:03 05/29/18 15:49       Perfluorooctanoic acid (PFOA)     26 J D M J K01 38 13 ug/Kg     05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM s Result 14 27 1.6 24 140 2600 %Recovery 96 88	E * M E * E *	J G0	0.38 0.38 0.38 0.51 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solls: 78
// Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL       LOQ       DL Unit       D Prepared       Analyzed       Dil I         Analyte       Result Qualifier       LOQ       DL Unit       D vig/Kg       05/14/18 14:03       05/29/18 15:49         Perfluorooctanoic acid (PFA)       26 J D M J K01       38       13 ug/Kg       05/14/18 14:03       05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM !  Result  14  27  1.6  24  140  2600  **Recovery  96  88  88  83	Qualific  E * M E * E * Qualific	J G0	0.38 0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol
Analyte         Result         Qualifier         LOQ         DL unit         D wit         D value         Prepared         Analyzed         Dil value           Perfluoroheptanoic acid (PFHpA)         14         J D *         38         10         ug/Kg         305/14/18 14:03         05/29/18 15:49           Perfluorooctanoic acid (PFOA)         26         J D M J K01         38         13         ug/Kg         05/14/18 14:03         05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorooctanesulfonic acid (PFNA) Perfluorooctanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorooctanesulfonic acid (PFNA)	S for QSM sesult  14 27 1.6 24 140 2600  %Recovery 96 88 83 25	Qualific  E * M E * E * Qualific	J G0	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol
Analyte         Result Qualifier         LOQ         DL unit         D wit         D value         Prepared Distriction         Analyzed Distriction         Distriction           Perfluoroheptanoic acid (PFHpA)         14         J D *         38         10         ug/Kg         05/14/18 14:03         05/29/18 15:49           Perfluorooctanoic acid (PFOA)         26         J D M J K01         38         13         ug/Kg         05/14/18 14:03         05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM sesult  14 27 1.6 24 140 2600  **Recovery 96 88 83 25 86	Qualific  E * M E * E * Qualific	J G0	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	C: So
Perfluorooctanoic acid (PFOA)         26 J D M J K01         38         13 ug/Kg         © 05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM sesult  14 27 1.6 24 140 2600  %Recovery  96 88 83 25 86 18	Qualific  E * M E * E * Qualific	J G0	LOQ  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solls: 78
Perfluorooctanoic acid (PFOA)         26 J D M J K01         38         13 ug/Kg         © 05/14/18 14:03 05/29/18 15:49	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (STORT)	Qualific  E * M E * E * Qualific	J G0	LOQ  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	Dil F
	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (Result Result 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Qualific  E * M E * E * Qualific	J G0	LOQ  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	Dil F
	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA malyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobetanesulfonic acid (PFNA)	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (Result 14	Qualified E * M E * E * Qualified Q Q Q 5.1, Tal Qualified J D	J G0	LOQ  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  150 - 150	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Sol

Lab Sample ID: 320-39023-28

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple ID:	KLA04-9	SB2-01
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Lab Sample ID: 320-39023-29 Date Collected: 05/04/18 08:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	14	JD JK	(01 51	7.5	ug/Kg	<u>∓</u>	05/14/18 14:03	05/29/18 15:49	100
Perfluorohexanesulfonic acid (PFHxS)	200	Jr	<01 <sup>38</sup>	7.9	ug/Kg	₽	05/14/18 14:03	05/29/18 15:49	100
Perfluorooctanesulfonic acid (PFOS)	6600	ED JK	(01 , N03 <sub>130</sub>	31	ug/Kg	₩	05/14/18 14:03	05/29/18 15:49	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	111	М	50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C4 PFOA	80		50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C5 PFNA	68		50 - 150				05/14/18 14:03	05/29/18 15:49	100
1802 PFHxS	64		50 - 150				05/14/18 14:03	05/29/18 15:49	100

Client Sample ID: KLA04-SB2-02

Lab Sample ID: 320-39023-30 Date Collected: 05/04/18 08:25

ate Collected: 05/04/18 08:25 ate Received: 05/09/18 09:20									Matrix Percent Solid	
Method: EPA 537 (Mod) - PFA Analyte	S for QSM (			3-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	45	E	*	0.39	0.10	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 09:17	
Perfluorooctanoic acid (PFOA)	200	Е	*	0.39	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	
Perfluorononanoic acid (PFNA)	1.6			0.39	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	
Perfluorobutanesulfonic acid (PFBS)	91	Е	*	0.53	0.078	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	
Perfluorohexanesulfonic acid (PFHxS)	510	E	*	0.39	0.082	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	
Perfluorooctanesulfonic acid (PFOS)	2100	E	*	1.3	0.32	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS	125			50 - 150				05/14/18 14:03	05/29/18 09:17	
13C4-PFHpA	69			50 - 150				05/14/18 14:03	05/29/18 09:17	
13C4 PFOA	82			50 - 150				05/14/18 14:03	05/29/18 09:17	
13C5 PFNA	55			50 - 150				05/14/18 14:03	05/29/18 09:17	
1802 PFHxS	65			50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 09:17	
13C4 PFOS	39	Q		50 - 150				05/14/18 14:03	05/29/18 09:17	
Method: EPA 537 (Mod) - PFA										
Analyte	Result		lifier	LOQ		Unit	D	Prepared	Analyzed	Dil F
Perfluoroheptanoic acid (PFHpA)	44	D	J K			ug/Kg	☼		05/29/18 15:57	10
Perfluorooctanoic acid (PFOA)	210	D	J K	)1 39	13	ug/Kg	☼	05/14/18 14:03	05/29/18 15:57	1
Perfluorononanoic acid (PFNA)	26	U M	*	39	11	ug/Kg	₽	05/14/18 14:03	05/29/18 15:57	1
Perfluorobutanesulfonic acid (PFBS)	84	D	Jŀ	K01 <sup>53</sup>	7.8	ug/Kg	≎	05/14/18 14:03	05/29/18 15:57	1
Perfluorohexanesulfonic acid (PFHxS)	1100	D	Jk	K01 <sup>39</sup>	8.2	ug/Kg	☼	05/14/18 14:03	05/29/18 15:57	1
Perfluorooctanesulfonic acid (PFOS)	4800	E D	M JK	01 , <b>N03</b> 30	32	ug/Kg	☼	05/14/18 14:03	05/29/18 15:57	1
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS	133	М		50 - 150				05/14/18 14:03	05/29/18 15:57	10

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Perfluorooctanoic acid (PFOA)

Client Sample ID: KLA04-SB2-02
--------------------------------

Lab Sample ID: 320-39023-30 Date Collected: 05/04/18 08:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 76.0

Method: EPA 537 (Mod	d) - PFAS for QSM 5.1, Table I	B-15 - DL (Continued)			
Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	95	50 - 150	05/14/18 14:03	05/29/18 15:57	100
13C5 PFNA	78	50 - 150	05/14/18 14:03	05/29/18 15:57	100
1802 PFHxS	78	50 - 150	05/14/18 14:03	05/29/18 15:57	100
13C4 PFOS	61	50 - 150	05/14/18 14:03	05/29/18 15:57	100

Client Sample ID: KLA04-SB3-01 Lab Sample ID: 320-39023-31

Date Collected: 05/04/18 08:05 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	3.8		0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 09:25	
Perfluorooctanoic acid (PFOA)	12		0.38	0.13	ug/Kg	₽	05/14/18 14:03	05/29/18 09:25	
Perfluorononanoic acid (PFNA)	1.1	M J G02	0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 09:25	
Perfluorobutanesulfonic acid	19		0.51	0.076	ug/Kg	₩	05/14/18 14:03	05/29/18 09:25	
Perfluorohexanesulfonic acid PFHxS)	51	E *	0.38		ug/Kg	₩	05/14/18 14:03	05/29/18 09:25	
Perfluorooctanesulfonic acid (PFOS)	1600	E *	1.3	0.31	ug/Kg	₩	05/14/18 14:03	05/29/18 09:25	
lsotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	86		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4-PFHpA	88		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C5 PFNA	28	Q	50 - 150				05/14/18 14:03	05/29/18 09:25	
1802 PFHxS	77		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4 PFOS	20	Q	50 - 150				05/14/18 14:03	05/29/18 09:25	
Perfluorooctanoic acid (PFOA)	12							05/29/18 17:23	
Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	12	D *						03/23/10 17.23	2
Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid		UM *	7.7 7.7 10	2.1	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	:
Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	5.1	U M *	7.7	2.1 1.5	ug/Kg		05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23	
Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	5.1 24 53	U M *	7.7	2.1 1.5 1.6	ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	:
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS)	5.1 24 53	UM * D * D J K01 E D *	7.7 10 7.7	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) sotope Dilution	5.1 24 53 3500	UM * D * D J K01 E D *	7.7 10 7.7 26	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <i>Prepared</i>	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) Isotope Dilution	5.1 24 53 3500 %Recovery	UM * D * D J K01 E D *	7.7 10 7.7 26 <i>Limits</i>	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed	Dil F
Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) (Sotope Dilution (13C3-PFBS) (13C4-PFHpA)	5.1 24 53 3500 %Recovery	UM * D * D J K01 E D *	7.7 10 7.7 26 <b>Limits</b> 50 - 150	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed 05/29/18 17:23	Dil F
Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) (sotope Dilution (3C3-PFBS) (13C4-PFHpA) (13C4 PFOA)	5.1 24 53 3500 %Recovery 54 75	UM * D * D J K01 E D *	7.7 10 7.7 26 <b>Limits</b> 50 - 150 50 - 150	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed 05/29/18 17:23 05/29/18 17:23	Dil F
Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) (Sotope Dilution (3C3-PFBS) (3C4-PFHpA) (3C4 PFOA)	5.1 24 53 3500 %Recovery 54 75 82	UM * D * D J K01 E D *	7.7 10 7.7 26 <b>Limits</b> 50 - 150 50 - 150 50 - 150	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	Dil F
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) sotope Dilution 3C3-PFBS 3C4-PFHpA 3C4 PFOA 3C5 PFNA	5.1 24 53 3500 %Recovery 54 75 82 59 69	UM * D * D J K01 E D *	7.7 10 7.7 26 <b>Limits</b> 50 - 150 50 - 150 50 - 150	2.1 1.5 1.6	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) Sotope Dilution 13C3-PFBS 13C4-PFHpA 13C5 PFNA 18O2 PFHxS 13C4 PFOS	5.1 24 53 3500 %Recovery 54 75 82 59 69 47	UM * D * D JK01 ED * Qualifier Q	7.7 10 7.7 26  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	2.1 1.5 1.6 6.1	ug/Kg ug/Kg ug/Kg ug/Kg	* *	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23	
Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) Isotope Dilution I3C3-PFBS I3C4-PFHpA I3C4 PFOA I3C5 PFNA I3C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte	5.1 24 53 3500 %Recovery 54 75 82 59 69 47	UM * D * D JK01 ED *  Qualifier  Q  5.1, Table B Qualifier	7.7 10 7.7 26  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 -150 -150 -150 -150 -150 -150 -150	2.1 1.5 1.6 6.1	ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23	Dil F
	5.1 24 53 3500 %Recovery 54 75 82 59 69 47	UM * D * D JK01 ED *  Qualifier  Q  5.1, Table B Qualifier	7.7 10 7.7 26  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	2.1 1.5 1.6 6.1	ug/Kg ug/Kg ug/Kg ug/Kg	* *	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23	

100

© 05/14/18 14:03 05/29/18 16:12

38

13 ug/Kg

13 J D \*

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

(PFHxS)

Perfluorooctanesulfonic acid

Client Sample ID: KLA04-SB3-01 Lab Sample ID: 320-39023-31

 Date Collected: 05/04/18 08:05
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 78.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	26	U *	38	10	ug/Kg	₩	05/14/18 14:03	05/29/18 16:12	100
Perfluorobutanesulfonic acid (PFBS)	16	JD *	51	7.6	ug/Kg	☼	05/14/18 14:03	05/29/18 16:12	100
Perfluorohexanesulfonic acid (PFHxS)	61	D *	38	7.9	ug/Kg	₽	05/14/18 14:03	05/29/18 16:12	100
Perfluorooctanesulfonic acid (PFOS)	4500	<b>ED</b> JK01	, N03 130	31	ug/Kg	☼	05/14/18 14:03	05/29/18 16:12	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71	M	50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4 PFOA	78		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C5 PFNA	73		50 - 150				05/14/18 14:03	05/29/18 16:12	100
1802 PFHxS	53		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4 PFOS	57		50 - 150				05/14/18 14:03	05/29/18 16:12	100

Client Sample ID: KLA04-SB3-02 Lab Sample ID: 320-39023-32

 Date Collected: 05/04/18 08:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 65.2

Date Received: 05/09/18 09:20									Percent Solid	ls: 65.2
Method: EPA 537 (Mod) - PFA Analyte	S for QSM (			3-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	29			0.46	0.12	ug/Kg	<u></u>	05/14/18 14:03	05/29/18 09:33	
Perfluorooctanoic acid (PFOA)	83	Е	*	0.46	0.15	ug/Kg	☼	05/14/18 14:03	05/29/18 09:33	1
Perfluorononanoic acid (PFNA)	1.2			0.46	0.12	ug/Kg	☼	05/14/18 14:03	05/29/18 09:33	1
Perfluorobutanesulfonic acid (PFBS)	80	Е	*	0.61	0.091	ug/Kg	₽	05/14/18 14:03	05/29/18 09:33	
Perfluorohexanesulfonic acid (PFHxS)	410	E	*	0.46	0.095	ug/Kg	₽	05/14/18 14:03	05/29/18 09:33	1
Perfluorooctanesulfonic acid (PFOS)	1900	ΕN	<b>/</b> *	1.5	0.37	ug/Kg	☼	05/14/18 14:03	05/29/18 09:33	1
Isotope Dilution	%Recovery	Qu	alifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	109			50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4-PFHpA	77			50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4 PFOA	87			50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C5 PFNA	51			50 - 150				05/14/18 14:03	05/29/18 09:33	1
18O2 PFHxS	65			50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4 PFOS	39	Q		50 - 150				05/14/18 14:03	05/29/18 09:33	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1,	Table I	B-15 - DL						
Analyte	Result	Qua	alifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	27	D	*	9.2	2.4	ug/Kg	₩	05/14/18 14:03	05/29/18 17:31	20
Perfluorooctanoic acid (PFOA)	85	D	J K01	9.2	3.1	ug/Kg	☼	05/14/18 14:03	05/29/18 17:31	20
Perfluorononanoic acid (PFNA)	6.1	UN	1 *	9.2	2.5	ug/Kg	☼	05/14/18 14:03	05/29/18 17:31	20
Perfluorobutanesulfonic acid (PFBS)	110	D	J K01	12	1.8	ug/Kg	₽	05/14/18 14:03	05/29/18 17:31	20
Perfluorohexanesulfonic acid	730	ΕC	*	9.2	1.9	ug/Kg	☼	05/14/18 14:03	05/29/18 17:31	20

 Isotope Dilution
 %Recovery 13C3-PFBS
 Qualifier 250-150
 Limits 250-150
 Prepared 250-150
 Analyzed 250-150
 Dil Fac 250-150

3500 E D M \*

31

7.4 ug/Kg

20

☼ 05/14/18 14:03 05/29/18 17:31

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample	ID: KLA04-SB3-02	
Olicit Gallibic	ID. IXEAUT-ODU-UE	

Lab Sample ID: 320-39023-32 Date Collected: 05/04/18 08:10 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 65.2

Isotope Dilution	%Recovery	Qualif	ier	Limits				Prepared	Analyzed	Dil Fac
13C4-PFHpA	84			50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C4 PFOA	87			50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C5 PFNA	78			50 - 150				05/14/18 14:03	05/29/18 17:31	20
1802 PFHxS	76			50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C4 PFOS	63			50 - 150				05/14/18 14:03	05/29/18 17:31	20
Method: EPA 537 (Mod) - PFA							_			D.: -
Analyte		Qualifi		LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)		JD	*	46		ug/Kg	<b>☆</b>		05/29/18 16:20	100
Perfluorooctanoic acid (PFOA)	79	_	*	46		ug/Kg	<b>☆</b>		05/29/18 16:20	100
Perfluorononanoic acid (PFNA)		UM	*	46		ug/Kg	: <del>Q</del> :		05/29/18 16:20	100
Perfluorobutanesulfonic acid (PFBS)	110	D	*	61	9.1	ug/Kg	Đ.	05/14/18 14:03	05/29/18 16:20	100
Perfluorohexanesulfonic acid (PFHxS)	730	D	J K01	46	9.5	ug/Kg	☆	05/14/18 14:03	05/29/18 16:20	100
Perfluorooctanesulfonic acid (PFOS)	3800	E D M	J K01	, N03150	37	ug/Kg	₩	05/14/18 14:03	05/29/18 16:20	100
Isotope Dilution	%Recovery	Qualif	ier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	72	M		50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C4-PFHpA	62			50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C4 PFOA	89			50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C5 PFNA	78			50 - 150				05/14/18 14:03	05/29/18 16:20	100
1802 PFHxS	69			50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C4 PFOS	64			50 - 150				05/14/18 14:03	05/29/18 16:20	100
Client Sample ID: KLA05-	SB1-01						La	ıb Sample	ID: 320-390	23-33
Pate Collected: 05/05/18 09:00								_	Matrix	: Solid
Pate Received: 05/09/18 09:20									Percent Solid	ls: 79.9
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1, Ta	ble B-	15						
Analyte	Result	Qualifi	ier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.6			0.38	0.098	ug/Kg	<del></del>	05/14/18 14:03	05/29/18 09:41	1
Perfluorooctanoic acid (PFOA)	2.3			0.38		ug/Kg	₩	05/14/18 14:03	05/29/18 09:41	1
Perfluorononanoic acid (PFNA)	0.61	M =		0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 09:41	1
Perfluorobutanesulfonic acid (PFBS)	4.9			0.50	0.074	ug/Kg	₽	05/14/18 14:03	05/29/18 09:41	1
Perfluorohexanesulfonic acid (PFHxS)	74	E *		0.38	0.078	ug/Kg	☼	05/14/18 14:03	05/29/18 09:41	1
Perfluorooctanesulfonic acid	130	Ε .	*	1.3	0.30	ug/Kg	≎	05/14/18 14:03	05/29/18 09:41	1

Perfluorooctanesulfonic acid (PFOS)	130	E *	1.3	0.30 ug/Kg	₩	05/14/18 14:03	05/29/18 09:41	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3-PFBS	72		50 - 150			05/14/18 14:03	05/29/18 09:41	1
13C4-PFHpA	81		50 - 150			05/14/18 14:03	05/29/18 09:41	1
13C4 PFOA	90		50 - 150			05/14/18 14:03	05/29/18 09:41	1
13C5 PFNA	74		50 - 150			05/14/18 14:03	05/29/18 09:41	1
1802 PFHxS	68		50 - 150			05/14/18 14:03	05/29/18 09:41	1
13C4 PFOS	68		50 - 150			05/14/18 14:03	05/29/18 09:41	1

Method: EPA 537 (Mod) - PFA	S for QSM 5.1, Table B-1	15 - DL					
Analyte	Result Qualifier	LOQ	DL Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.0 U *	7.6	2.0 ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB1-01 Lab Sample ID: 320-39023-33

 Date Collected: 05/05/18 09:00
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 79.9

Analyte	Result	Quali	ifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.0	UM	*	7.6	2.5	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 14:38	20
Perfluorononanoic acid (PFNA)	5.0	U	*	7.6	2.0	ug/Kg	₩	05/14/18 14:03	05/29/18 14:38	20
Perfluorobutanesulfonic acid (PFBS)	6.2	JD	*	10	1.5	ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20
Perfluorohexanesulfonic acid (PFHxS)	78	D	J K01	7.6	1.6	ug/Kg	₩	05/14/18 14:03	05/29/18 14:38	20
Perfluorooctanesulfonic acid (PFOS)	170	D	J K01	25	6.0	ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20
Isotope Dilution	%Recovery	Qual	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	54			50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4-PFHpA	83			50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4 PFOA	97			50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C5 PFNA	90			50 - 150				05/14/18 14:03	05/29/18 14:38	20
1802 PFHxS	75			50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4 PFOS	69			50 - 150				05/14/18 14:03	05/29/18 14:38	20

Client Sample ID: KLA05-SB1-02 Lab Sample ID: 320-39023-34

 Date Collected: 05/05/18 09:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 78.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.38	0.098	ug/Kg	₩	05/14/18 14:03	05/29/18 14:15	1
Perfluorooctanoic acid (PFOA)	0.23	J	0.38	0.13	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Perfluorononanoic acid (PFNA)	0.25	U	0.38	0.10	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Perfluorobutanesulfonic acid (PFBS)	0.077	J	0.50	0.074	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	2.6		0.38	0.078	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Perfluorooctanesulfonic acid (PFOS)	6.5		1.3	0.30	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 14:03	05/29/18 14:15	1
13C4-PFHpA	81		50 - 150				05/14/18 14:03	05/29/18 14:15	1
13C4 PFOA	88		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:15	

1303-PFBS	08	50 - 150	05/14/18 14:03	05/29/18 14:15	7
13C4-PFHpA	81	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C4 PFOA	88	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C5 PFNA	88	50 - 150	05/14/18 14:03	05/29/18 14:15	1
1802 PFHxS	70	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C4 PFOS	72	50 - 150	05/14/18 14:03	05/29/18 14:15	1
<del>-</del>					

Client Sample ID: KLA05-SB2-01 Lab Sample ID: 320-39023-35

Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.45	0.36	0.092	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	1
Perfluorooctanoic acid (PFOA)	1.6	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	1
Perfluorononanoic acid (PFNA)	0.36	0.36	0.096	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	1
Perfluorobutanesulfonic acid	0.32 J	0.47	0.070	ug/Kg	₽	05/14/18 14:03	05/29/18 09:56	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple ID:	KLA05-9	SB2-01
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Lab Sample ID: 320-39023-35 Date Collected: 05/05/18 09:30 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 85.2

Analyte	Result	Qua	lifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluorohexanesulfonic acid (PFHxS)	20			0.36	0.073	ug/Kg	<del></del>	05/14/18 14:03	05/29/18 09:56	
Perfluorooctanesulfonic acid (PFOS)	37	E	*	1.2	0.28	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	69			50 - 150				05/14/18 14:03	05/29/18 09:56	
13C4-PFHpA	85			50 - 150				05/14/18 14:03	05/29/18 09:56	
13C4 PFOA	92			50 - 150				05/14/18 14:03	05/29/18 09:56	
13C5 PFNA	89			50 - 150				05/14/18 14:03	05/29/18 09:56	
1802 PFHxS	71			50 - 150				05/14/18 14:03	05/29/18 09:56	
13C4 PFOS	73			50 - 150				05/14/18 14:03	05/29/18 09:56	
Perfluorononanoic acid (PFNA)		UM		3.6		ug/Kg	<b>#</b>	05/14/18 14:03	05/29/18 14:46	1
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluoropaga acid (PFNA)		J D		3.6 3.6	1.2	ug/Kg ug/Kg	\$ \$ *	05/14/18 14:03 05/14/18 14:03		1
Perfluorobutanesulfonic acid (PERS)	2.1	11	*	17	0.70	ua/ka	-0-		05/20/18 11:46	
Perfluorobutanesulfonic acid (PFBS)	2.1		*	4.7 3.6	0.70	0 0	₽		05/29/18 14:46 05/29/18 14:46	
Perfluorohexanesulfonic acid	2.1 <b>20</b>		*	4.7 3.6		ug/Kg ug/Kg	ф Ф		05/29/18 14:46 05/29/18 14:46	
Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)		D			0.73	0 0	\$ \$	05/14/18 14:03		1
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	20	D D	* J K01	3.6	0.73	ug/Kg		05/14/18 14:03	05/29/18 14:46	1 1 1 <b>Dil F</b> a
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	20 40	D D	* J K01	3.6 12	0.73	ug/Kg		05/14/18 14:03 05/14/18 14:03 <b>Prepared</b>	05/29/18 14:46 05/29/18 14:46	1
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	20 40 %Recovery	D D	* J K01	3.6 12 <i>Limits</i>	0.73	ug/Kg		05/14/18 14:03 05/14/18 14:03  Prepared 05/14/18 14:03	05/29/18 14:46 05/29/18 14:46 <i>Analyzed</i>	1 1 <i>Dil Fa</i>
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	20 40 %Recovery 59	D D	* J K01	3.6 12 <i>Limits</i> 50 - 150	0.73	ug/Kg		05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03	05/29/18 14:46 05/29/18 14:46 <b>Analyzed</b> 05/29/18 14:46	1 1 Dil Fa
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	20 40 %Recovery 59 82	D D	* J K01	3.6 12 <b>Limits</b> 50 - 150 50 - 150	0.73	ug/Kg		05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 14:46 05/29/18 14:46 <b>Analyzed</b> 05/29/18 14:46 05/29/18 14:46	1 1 Dil Fa 1 1
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	20 40 %Recovery 59 82 86	D D	* J K01	3.6 12 <b>Limits</b> 50 - 150 50 - 150 50 - 150	0.73	ug/Kg		05/14/18 14:03 05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 14:46 05/29/18 14:46 <b>Analyzed</b> 05/29/18 14:46 05/29/18 14:46 05/29/18 14:46	1 1 Dil Fa

Client Sample ID: KLA05-SB2-02 Lab Sample ID: 320-39023-36

Date Collected: 05/05/18 09:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 75.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.38	J	0.40	0.10	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 10:04	1
Perfluorooctanoic acid (PFOA)	1.2		0.40	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Perfluorononanoic acid (PFNA)	0.34	JM J	0.40	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Perfluorobutanesulfonic acid (PFBS)	0.29	J	0.53	0.078	ug/Kg	₽	05/14/18 14:03	05/29/18 10:04	1
Perfluorohexanesulfonic acid (PFHxS)	8.9		0.40	0.082	ug/Kg	₩	05/14/18 14:03	05/29/18 10:04	1
Perfluorooctanesulfonic acid (PFOS)	40	E *	1.3	0.32	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C4 PFOA	85		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C5 PFNA	87		50 - 150				05/14/18 14:03	05/29/18 10:04	1
18O2 PFHxS	74		50 - 150				05/14/18 14:03	05/29/18 10:04	1

TestAmerica Sacramento

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB2-02 Lab Sample ID: 320-39023-36

 Date Collected: 05/05/18 09:40
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.4

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C4 PFOS	72		50 - 150				05/14/18 14:03	05/29/18 10:04	
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil F
Perfluoroheptanoic acid (PFHpA)	2.7	U *	4.0	1.0	ug/Kg	₩	05/14/18 14:03	05/29/18 14:54	
Perfluorooctanoic acid (PFOA)	1.3	J D *	4.0	1.3	ug/Kg	☼	05/14/18 14:03	05/29/18 14:54	
Perfluorononanoic acid (PFNA)	2.7	U *	4.0	1.1	ug/Kg	≎	05/14/18 14:03	05/29/18 14:54	
Perfluorobutanesulfonic acid (PFBS)	2.4	U *	5.3	0.78	ug/Kg	ф.	05/14/18 14:03	05/29/18 14:54	
Perfluorohexanesulfonic acid (PFHxS)	9.7	D *	4.0		ug/Kg	₩	05/14/18 14:03	05/29/18 14:54	
Perfluorooctanesulfonic acid (PFOS)	42	D M	I K01 13	3.2	ug/Kg	₩	05/14/18 14:03	05/29/18 14:54	
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS	72		50 - 150				05/14/18 14:03	05/29/18 14:54	
13C4-PFHpA	77		50 - 150				05/14/18 14:03	05/29/18 14:54	
13C4 PFOA	92		50 - 150				05/14/18 14:03	05/29/18 14:54	
13C5 PFNA	85		50 - 150				05/14/18 14:03	05/29/18 14:54	
1802 PFHxS	72		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:54	
13C4 PFOS	70		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:54	
ate Collected: 05/05/18 10:10								Matrix	
ate Collected: 05/05/18 10:10 ate Received: 05/09/18 09:20								Percent Solid	
	S for QSM !	5.1, Table	B-15						
ate Received: 05/09/18 09:20		5.1, Table Qualifier	B-15 LOQ	DL	Unit	D	Prepared		
ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA					Unit ug/Kg	<b>D</b>	Prepared	Percent Solid	ls: 83
ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA Analyte	Result		LOQ	0.092			Prepared 05/14/18 14:03	Percent Solid	ls: 83
ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA  Analyte  Perfluoroheptanoic acid (PFHpA)	Result 14	Qualifier E *		0.092 0.12 0.096	ug/Kg ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 10:20	ls: 83
ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)	Result 14 57 2.6 6.7	Qualifier  E * M	0.36 0.36 0.36 0.36 0.47	0.092 0.12 0.096 0.070	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	ls: 83
ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)	Result 14 57 2.6 6.7 430	Qualifier  E * M	0.36 0.36 0.36 0.36 0.47 0.36	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	ls: 83
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	Result 14 57 2.6 6.7 430 4600	Qualifier  E * M  E *	0.36 0.36 0.36 0.47 0.36 1.2	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	Result 14 57 2.6 6.7 430 4600 %Recovery	Qualifier  E * M  E *	0.36 0.36 0.36 0.47 0.36 1.2 Limits	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  05/29/18 10:20  Analyzed	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorophexanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	Result 14 57 2.6 6.7 430 4600 %Recovery	Qualifier  E * M  E *	0.36 0.36 0.36 0.47 0.36 1.2 Limits 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) 13C3-PFBS 13C4-PFHpA	Result 14 57 2.6 6.7 430 4600 %Recovery 122 66	Qualifier  E * M  E *	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorophexanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	Result 14 57 2.6 6.7 430 4600 %Recovery	Qualifier  E * M  E *	0.36 0.36 0.36 0.47 0.36 1.2 Limits 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) 13C3-PFBS 13C4-PFHpA	Result 14 57 2.6 6.7 430 4600 %Recovery 122 66	Qualifier  E * M  E * Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result 14 57 2.6 6.7 430 4600  **Recovery 122 66 87	Qualifier  E * M  E * Qualifier	UGO2 0.36 0.36 0.47 0.36 1.2 Limits 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result 14 57 2.6 6.7 430 4600 %Recovery 122 66 87 19	Qualifier  E * M  E * Qualifier	UGQ 0.36 0.36 0.47 0.36 1.2 Limits 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil I
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluoroctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA	## Result  14  57  2.6  6.7  430  4600  ## Recovery  122  66  87  19  46  13  S for QSM 4	Qualifier  E * M  E * Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * *	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte	## Result    14	Qualifier  E * M  E * Qualifier	LOQ 0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNX) Perfluoroctanesulfonic acid (PFNXS) Perfluorooctanesulfonic acid (PFNXS) Perfluorooctanesulfonic acid (PFNXS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	## Result    14	Qualifier  E * M  E * Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * *	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte	Result  14  57  2.6  6.7  430  4600  **Recovery  122  66  87  19  46  13  S for QSM (Result)  Result  13	Qualifier  E * M  E * Qualifier	LOQ 0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	ls: 83
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNX) Perfluoroctanesulfonic acid (PFNXS) Perfluorooctanesulfonic acid (PFNXS) Perfluorooctanesulfonic acid (PFNXS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	Result  14  57  2.6  6.7  430  4600  **Recovery  122  66  87  19  46  13  S for QSM (Result)  Result  13	Qualifier  E * M  E * Qualifier  Q Q Q Q Q Q  5.1, Table Qualifier J D * D J K01	LOQ 0.36 0.36 0.36 0.47 0.36 1.2 Limits 50 - 150 50 - 150 30 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- D - D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil F

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB3-01 Lab Sample ID: 320-39023-37

 Date Collected: 05/05/18 10:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 83.8

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	650	D J K01	36	7.3	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 16:28	100
Perfluorooctanesulfonic acid (PFOS)	14000	<b>E D</b> J K01	, N03 <sup>120</sup>	28	ug/Kg	₩	05/14/18 14:03	05/29/18 16:28	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	60	M	50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4-PFHpA	80		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4 PFOA	82		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C5 PFNA	68		50 - 150				05/14/18 14:03	05/29/18 16:28	100
1802 PFHxS	75		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4 PFOS	53		50 - 150				05/14/18 14:03	05/29/18 16:28	100

Client Sample ID: KLA05-SB3-02 Lab Sample ID: 320-39023-38

 Date Collected: 05/05/18 10:20
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 80.4

ate Received: 05/09/18 09:20								<u> </u>	Percent Solid	
Method: EPA 537 (Mod) - PFA Analyte	S for QSM &			-15 LOQ	DI	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	1.5	Quui		0.37		ug/Kg	— <del> </del>	05/14/18 14:03	•	- Dil 1 u
Perfluorooctanoic acid (PFOA)	3.8			0.37		ug/Kg	₩	05/14/18 14:03		
Perfluorononanoic acid (PFNA)	0.25	J M	J	0.37		ug/Kg	₩		05/29/18 10:28	
Perfluorobutanesulfonic acid PFBS)	0.58			0.50		ug/Kg			05/29/18 10:28	
Perfluorohexanesulfonic acid PFHxS)	15			0.37	0.077	ug/Kg	☼	05/14/18 14:03	05/29/18 10:28	
Perfluorooctanesulfonic acid	560	E *		1.2	0.30	ug/Kg	₩	05/14/18 14:03	05/29/18 10:28	1
sotope Dilution	%Recovery	Qual	lifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	73			50 - 150				05/14/18 14:03	05/29/18 10:28	
13C4-PFHpA	81			50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C4 PFOA	87			50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C5 PFNA	50			50 - 150				05/14/18 14:03	05/29/18 10:28	
				30 - 130						
	73			50 - 150 50 - 150				05/14/18 14:03	05/29/18 10:28	1
1802 PFHxS		Q							05/29/18 10:28 05/29/18 10:28	1 1
1802 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	73 40 S for QSM & Result	5.1, T Qual		50 - 150 50 - 150 -15 - DL LOQ		Unit	D	05/14/18 14:03 Prepared	05/29/18 10:28 Analyzed	Dil Fac
18O2 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	73 40 S for QSM ( Result 25	<b>5.1, T</b> <b>Q</b> ual		50 - 150 50 - 150 -15 - DL LOQ 37	9.7	ug/Kg	D ङ	05/14/18 14:03  Prepared  05/14/18 14:03	05/29/18 10:28  Analyzed 05/29/18 16:44	
18O2 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	73 40 S for QSM 8 Result 25 25	<b>5.1, T Qual</b> U	ifier	50 - 150 50 - 150 -15 - DL LOQ 37 37	9.7 12	ug/Kg ug/Kg		05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorononanoic acid (PFNA)	73 40 S for QSM ( Result 25	<b>5.1, T Qual</b> U	ifier *	50 - 150 50 - 150 -15 - DL LOQ 37	9.7 12	ug/Kg	<del></del>	05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	05/29/18 10:28  Analyzed 05/29/18 16:44	Dil Fac
1802 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	73 40 S for QSM 8 Result 25 25	<b>5.1, T Qual</b> U U U	ifier *	50 - 150 50 - 150 -15 - DL LOQ 37 37	9.7 12 10	ug/Kg ug/Kg	<u>₩</u>	05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44	Dil Fac
1802 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	73 40 S for QSM ( Result 25 25 25 25 22	<b>5.1, T Qual</b> U U U	ifier * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 37	9.7 12 10 7.4	ug/Kg ug/Kg ug/Kg	<u>₩</u>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44	Dil Fac 100 100 100
1802 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluoroctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid	73 40 S for QSM ( Result 25 25 25 25 22	5.1, T Qual U U U U U	* * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 37 50	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44	Dil Fac 100 100 100 100
1802 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid	73 40 S for QSM ( Result 25 25 25 22 13 980 %Recovery	5.1, T Qual U U U U J D	* * * * * * * * * * * * * * * * * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 37 50 37	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44	Dil Face 100 100 100 100 100 100 100
1802 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	73 40 S for QSM ( Result 25 25 25 25 22 13	5.1, T Qual U U U U J D	* * * * * * * * * * * * * * * * * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 37 50 37	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44	Dil Face 1000 1000 1000 1000 1000 1000 1000
1802 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	73 40 S for QSM ( Result 25 25 25 22 13 980 %Recovery	5.1, T Qual U U U U J D	* * * * * * * * * * * * * * * * * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 37 50 37 120	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  Analyzed	Dil Fac  100  100  100  100  100  100  100  1
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFOS) Usotope Dilution	73 40 S for QSM 8 Result 25 25 25 22 13 980 %Recovery	5.1, T Qual U U U U J D	* * * * * * * * * * * * * * * * * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 50 37 120 Limits 50 - 150	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Analyzed  O5/29/18 10:28  Analyzed  O5/29/18 16:44  O5/29/18 16:44  O5/29/18 16:44  O5/29/18 16:44  Analyzed  O5/29/18 16:44	Dil Face  100 100 100 100 100 100 100 100 100 1
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorobexanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFBS) Parfluorooctanesulfonic acid (PFBS) 13C3-PFBS 13C4-PFHpA	73 40 S for QSM 8 Result 25 25 25 22 13 980 %Recovery 78 81	5.1, T Qual U U U U J D	* * * * * * * * * * * * * * * * * * *	50 - 150 50 - 150 -15 - DL LOQ 37 37 50 37 120 Limits 50 - 150 50 - 150	9.7 12 10 7.4 7.7	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 10:28  Analyzed  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  05/29/18 16:44  Analyzed  05/29/18 16:44  05/29/18 16:44	Dil Fac 100 100 100

TestAmerica Sacramento

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB3-02

Lab Sample ID: 320-39023-38 Date Collected: 05/05/18 10:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 80.4

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 70 05/14/18 14:03 05/29/18 16:44 13C4 PFOS 50 - 150 100

Client Sample ID: KLA06-SB1-01

(PFHxS)

Lab Sample ID: 320-39023-39 Date Collected: 05/01/18 14:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 73.2

Analyte	Result	Quali	fier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.71	-		0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Perfluorooctanoic acid (PFOA)	1.3			0.41	0.14	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Perfluorononanoic acid (PFNA)	2.4			0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Perfluorobutanesulfonic acid (PFBS)	0.27	J		0.54	0.080	ug/Kg	*	05/14/18 13:10	06/06/18 23:18	1
Perfluorohexanesulfonic acid (PFHxS)	11			0.41	0.084	ug/Kg	≎	05/14/18 13:10	06/06/18 23:18	1
Perfluorooctanesulfonic acid (PFOS)	190	ME	*	1.4	0.32	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Isotope Dilution	%Recovery	Quali	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	72	-		50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4-PFHpA	77			50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4 PFOA	79			50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C5 PFNA	62			50 - 150				05/14/18 13:10	06/06/18 23:18	1
1802 PFHxS	73			50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4 PFOS	62			50 - 150				05/14/18 13:10	06/06/18 23:18	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, T	able	B-15 - DL						
Analyte	Result	Quali	fier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.4	U	*	8.1	2.1	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
Perfluorooctanoic acid (PFOA)	5.4	U M	*	8.1	2.7	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
Perfluorononanoic acid (PFNA)	2.5	J D	*	8.1	2.2	ug/Kg	≎	05/14/18 13:10	05/29/18 11:30	20
Perfluorobutanesulfonic acid (PFBS)	4.9	U	*	11	1.6	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 11:30	20
Perfluorohexanesulfonic acid	11	D	*	8.1	17	ug/Kg	₩	05/14/18 13:10	05/20/18 11:30	20

Perfluorooctanesulfonic acid (PFOS)	250	<b>D</b> J K01	27	6.5 ug/Kg	₩	05/14/18 13:10	05/29/18 11:30	20
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3-PFBS	67		50 - 150			05/14/18 13:10	05/29/18 11:30	20
13C4-PFHpA	76		50 - 150			05/14/18 13:10	05/29/18 11:30	20
13C4 PFOA	82		50 - 150			05/14/18 13:10	05/29/18 11:30	20
13C5 PFNA	79		50 - 150			05/14/18 13:10	05/29/18 11:30	20
18O2 PFHxS	71		50 - 150			05/14/18 13:10	05/29/18 11:30	20
13C4 PFOS	68		50 - 150			05/14/18 13:10	05/29/18 11:30	20
13C4 PFOA 13C5 PFNA 18O2 PFHxS	82 79 71		50 - 150 50 - 150 50 - 150			05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:30 05/29/18 11:30 05/29/18 11:30	20 20 20

Client Sample ID: KLA06-SB1-02 Lab Sample ID: 320-39023-40

Date Collected: 05/01/18 14:20 Matrix: Solid Date Received: 05/09/18 09:20 Percent Solids: 79.6

Method: EPA 537 (Mod) - PFAS								
Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25 J	0.37	0.097	ug/Kg	<b>☆</b>	05/14/18 13:10	06/06/18 23:26	1
Perfluorooctanoic acid (PFOA)	1.1	0.37	0.12	ug/Kg	₽	05/14/18 13:10	06/06/18 23:26	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Cliont	Sample	ID: KI	AOG	CD4 02	
Cilent	Samble	ID: NL	-OUA-	3D I-UZ	

Lab Sample ID: 320-39023-40 Date Collected: 05/01/18 14:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.6

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	1.4		0.37	0.10	ug/Kg	- ☆	05/14/18 13:10	06/06/18 23:26	1
Perfluorobutanesulfonic acid (PFBS)	0.19	J	0.50	0.073	ug/Kg	\$	05/14/18 13:10	06/06/18 23:26	1
Perfluorohexanesulfonic acid (PFHxS)	6.8		0.37	0.077	ug/Kg	₩	05/14/18 13:10	06/06/18 23:26	1
Perfluorooctanesulfonic acid (PFOS)	100	M E *	1.2	0.30	ug/Kg	\$	05/14/18 13:10	06/06/18 23:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4-PFHpA	81		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4 PFOA	76		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C5 PFNA	70		50 - 150				05/14/18 13:10	06/06/18 23:26	1
1802 PFHxS	72		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4 PFOS	68		50 - 150				05/14/18 13:10	06/06/18 23:26	1
Method: EPA 537 (Mod) - PFA				D.	l lmi4		Dropored	Analyzad	Dil For
Method: EPA 537 (Mod) - PFA	AS for QSM 5	5.1, Table B	-15 - DL						
Analyte	Result	Qualifier	LOQ		Unit	<b>D</b>	Prepared	Analyzed	
Analyte Perfluoroheptanoic acid (PFHpA)	Result 5.0	Qualifier U M *	LOQ 7.4	1.9	ug/Kg	<b>D</b>	05/14/18 13:10	05/29/18 11:38	20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	5.0 5.0	Qualifier U M * U *	7.4 7.4	1.9 2.5	ug/Kg ug/Kg		05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38	20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	5.0 5.0 5.0	Qualifier UM * U * UM *	7.4 7.4 7.4	1.9 2.5 2.0	ug/Kg ug/Kg ug/Kg		05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	Result 5.0 5.0 5.0 4.5	Qualifier UM * U * UM *	7.4 7.4	1.9 2.5 2.0 1.5	ug/Kg ug/Kg	<del>\$</del>	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38	20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS)	Result 5.0 5.0 5.0 4.5	Qualifier  U M *  U M *  U M *  U M *	7.4 7.4 7.4 9.9 7.4	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg	# # #	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	5.0 5.0 5.0 5.0 4.5 <b>6.6</b>	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 7.4 9.9 7.4	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	5.0 5.0 5.0 4.5 6.6	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 7.4 9.9 7.4	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	5.0 5.0 5.0 4.5 6.6 120	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 7.4 9.9 7.4 25	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	\$5.0 \$5.0 \$5.0 \$4.5 \$6.6 \$120 \$\$%Recovery \$69\$	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 9.9 7.4 25  Limits 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38	20 20 20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	\$5.0	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 9.9 7.4 25 Limits 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result	Qualifier  U M *  U M *  U M *  U M *  U M *  J D *	7.4 7.4 9.9 7.4 25  Limits 50 - 150 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * * * * * * * * * * * * * * * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2

Client Sample ID: KLA06-SB2-01 Lab Sample ID: 320-39023-41

Date Collected: 05/01/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 63.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	<b>J1</b> J H01	0.48	0.12	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorooctanoic acid (PFOA)	6.7	<b>J1</b> J H01	0.48	0.16	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorononanoic acid (PFNA)	1.6		0.48	0.13	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorobutanesulfonic acid (PFBS)	0.99		0.64	0.094	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorohexanesulfonic acid (PFHxS)	42	E J1 *	0.48	0.099	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorooctanesulfonic acid (PFOS)	580	E J1 *	1.6	0.38	ug/Kg	☼	05/14/18 13:10	06/06/18 23:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	82		50 - 150				05/14/18 13:10	06/06/18 23:34	1
13C4-PFHpA	82		50 - 150				05/14/10 12:10	06/06/18 23:34	1

TestAmerica Sacramento

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

 Date Collected: 05/01/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 63.5

Isotope Dilution	%Recovery	Qualifier		imits				Prepared	Analyzed	Dil Fa
13C4 PFOA	84			0 - 150				05/14/18 13:10	06/06/18 23:34	
13C5 PFNA	54		5	0 - 150				05/14/18 13:10	06/06/18 23:34	
1802 PFHxS	75		5	50 - 150				05/14/18 13:10	06/06/18 23:34	
13C4 PFOS	54		5	50 - 150				05/14/18 13:10	06/06/18 23:34	
Method: EPA 537 (Mod) - PFA		5.1, Table Qualifier	e B-1	5 - DL LOQ	DI	Unit	D	Dranavad	Analyzad	Dil Fa
Analyte Perfluoroheptanoic acid (PFHpA)		J D J1		4.8		ug/Kg	— <del>=</del>	Prepared	Analyzed 05/29/18 12:49	10 Fa
		D J1	*	4.8		ug/Kg ug/Kg	☆		05/29/18 12:49	1
Perfluorooctanoic acid (PFOA)			*				*			
Perfluorononanoic acid (PFNA)		JD	*	4.8		ug/Kg	#.		05/29/18 12:49	1(
Perfluorobutanesulfonic acid (PFBS)		J D J1	*	6.4		ug/Kg	<b>‡</b>		05/29/18 12:49	10
Perfluorohexanesulfonic acid (PFHxS)	44	D J1	J K01	4.8	0.99	ug/Kg	☼	05/14/18 13:10	05/29/18 12:49	10
Perfluorooctanesulfonic acid (PFOS)	860	EDMJ1	*	16	3.8	ug/Kg	☼	05/14/18 13:10	05/29/18 12:49	10
Isotope Dilution	%Recovery	Qualifier	L	imits				Prepared	Analyzed	Dil Fac
13C3-PFBS	67	-	5	0 - 150				05/14/18 13:10	05/29/18 12:49	10
13C4-PFHpA	80		5	50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 12:49	10
13C4 PFOA	85		5	50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 12:49	10
13C5 PFNA	77		5	0 - 150				05/14/18 13:10	05/29/18 12:49	10
			-	0 450						
18O2 PFHxS	74		5	50 - 150				05/14/18 13:10	05/29/18 12:49	10
1802 PFHxS 13C4 PFOS	74 64			50 - 150 50 - 150					05/29/18 12:49 05/29/18 12:49	10 10
	64	5.1, Tabl	5	50 - 150						
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	64 S for QSM ! Result	Qualifier	5	50 - 150		Unit	D			
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	64 S for QSM !	Qualifier	5	50 - 150 <b>5 - DL2</b>		Unit ug/Kg	D ङ	05/14/18 13:10  Prepared	05/29/18 12:49	10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	64 S for QSM ! Result	Qualifier U	5	50 - 150 5 - DL2 LOQ	12			05/14/18 13:10  Prepared  05/14/18 13:10	05/29/18 12:49 Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result	Qualifier U U	5	50 - 150 5 - DL2 LOQ 48	12 16	ug/Kg	<del>\</del>	05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	05/29/18 12:49  Analyzed  05/29/18 12:02	Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA	S for QSM ( Result 32 32	Qualifier U U U	5	50 - 150 5 - DL2 LOQ 48 48	12 16 13	ug/Kg ug/Kg		05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	05/29/18 12:49  Analyzed  05/29/18 12:02 05/29/18 12:02	Dil Fac 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM (Result 32 32 32 29	Qualifier U U U	5	50 - 150 5 - DL2 LOQ 48 48 48	12 16 13	ug/Kg ug/Kg ug/Kg		Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02	Dil Fac 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM (Result 32 32 32 29 39	Qualifier U U U U	5	50 - 150 5 - DL2 LOQ 48 48 48 48 64 48	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02	Dil Fac 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM (Result 32 32 32 29 39	Qualifier U U U U J D J1 D M J1	e B-18	50 - 150 5 - DL2 LOQ 48 48 48 48 64 48	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02	Dil Fac 100 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM ! Result 32 32 32 29 39 960 %Recovery	Qualifier U U U U J D J1 D M J1	* * * * * * * * * * * * * * * * * * *	5 - DL2 LOQ 48 48 48 64 48	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed 05/29/18 12:02 05/29/18 12:02 05/29/18 12:02 05/29/18 12:02 05/29/18 12:02 05/29/18 12:02	Dil Fac  100 100 100 100 100 100 100 100 100 1
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluoroputanesulfonic acid (PFBS) Perfluoroputanesulfonic acid (PFBS) Perfluoroputanesulfonic acid (PFBS)	S for QSM ! Result 32 32 32 29 39 960 %Recovery	Qualifier U U U J D J1 D M J1 Qualifier	# B-18  * *  * *  J K01	5 - DL2 LOQ 48 48 48 64 48 1 160	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10	Analyzed  O5/29/18 12:49  Analyzed  O5/29/18 12:02  O5/29/18 12:02  O5/29/18 12:02  O5/29/18 12:02  O5/29/18 12:02  Analyzed	Dil Fac  100  100  100  100  100  100  100  1
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFBS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	\$ for QSM \$ Result   32   32   32   29   39   960   %Recovery   68	Qualifier U U U J D J1 D M J1 Qualifier	*  *  J K01  L 55	50 - 150 5 - DL2 LOQ 48 48 48 64 48 160 Limits 50 - 150	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  Analyzed  05/29/18 12:02	100 100 100 100 100 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFBS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFDS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	64 S for QSM ( Result  32 32 32 29 39 960  %Recovery 68 66 81	Qualifier U U U J D J1 D M J1 Qualifier	*  *  J K01	50 - 150 5 - DL2 LOQ 48 48 48 64 48 1 160 Limits 50 - 150	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  Analyzed  05/29/18 12:02  05/29/18 12:02	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS)	\$ for QSM !  Result  32 32 32 29 39 960  **Recovery 68 66	Qualifier U U U J D J1 D M J1 Qualifier	# * * * * * * * * * * * * * * * * * * *	50 - 150 5 - DL2 LOQ 48 48 48 64 48 160 -imits 50 - 150 50 - 150	12 16 13 9.4 9.9	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	- <del>-</del>	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10  Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 12:49  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02  Analyzed  05/29/18 12:02  05/29/18 12:02  05/29/18 12:02	Dil Fac  100 100 100 100 100 100 100 100 100 1

Client Sample ID: KLA06-SB2-02 Lab Sample ID: 320-39023-42

 Date Collected: 05/01/18 13:50
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 70.3

Method: EPA 537 (Mod) - PFAS	for QSM 5.	.1, Table E	3-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.6		0.43	0.11	ug/Kg	₩	05/14/18 13:10	06/07/18 00:13	1
Perfluorooctanoic acid (PFOA)	6.4		0.43	0.14	ug/Kg	≎	05/14/18 13:10	06/07/18 00:13	1
Perfluorononanoic acid (PFNA)	1.7	J G02	0.43	0.12	ug/Kg	₩	05/14/18 13:10	06/07/18 00:13	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Lab Sample ID: 320-39023-42 Date Collected: 05/01/18 13:50 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 70.3

Method: EPA 537 (Mod) - PFAS		5.1, Table B Qualifier	•		Unit	D	Droparad	Analyzod	Dil F
Analyte		Qualifier	LOQ			— <del>¤</del>	Prepared 05/14/18 13:10	Analyzed	חווע -
Perfluorobutanesulfonic acid PFBS)	2.1		0.57		ug/Kg		00/11/10/10:10		
Perfluorohexanesulfonic acid PFHxS)	40	E *	0.43	0.089	ug/Kg	<del>.</del>	05/14/18 13:10	06/07/18 00:13	
Perfluorooctanesulfonic acid PFOS)	920	E *	1.4	0.34	ug/Kg	₽	05/14/18 13:10	06/07/18 00:13	
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
3C3-PFBS	81		50 - 150				05/14/18 13:10	06/07/18 00:13	
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/07/18 00:13	
13C4 PFOA	83		50 - 150				05/14/18 13:10	06/07/18 00:13	
13C5 PFNA	44	Q	50 - 150				05/14/18 13:10	06/07/18 00:13	
1802 PFHxS	75	·	50 - 150				05/14/18 13:10	06/07/18 00:13	
13C4 PFOS	40	Q	50 - 150					06/07/18 00:13	
Method: EPA 537 (Mod) - PFAS	S for QSM	5.1, Table B	-15 - DL						
Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil F
Perfluoroheptanoic acid (PFHpA)	1.8	JD *	4.3	1.1	ug/Kg	<del>\</del>	05/14/18 13:10	05/29/18 13:28	
Perfluorooctanoic acid (PFOA)	6.2	D *	4.3	1.4	ug/Kg	☼	05/14/18 13:10	05/29/18 13:28	
Perfluorononanoic acid (PFNA)	1.8	JD *	4.3	1.2	ug/Kg	₽	05/14/18 13:10	05/29/18 13:28	
Perfluorobutanesulfonic acid	2.1	JD *	5.7	0.84	ug/Kg		05/14/18 13:10	05/29/18 13:28	
Perfluorohexanesulfonic acid PFHxS)	45	D J K01	4.3	0.89	ug/Kg	☼	05/14/18 13:10	05/29/18 13:28	
Perfluorooctanesulfonic acid PFOS)	1300	ED *	14	3.4	ug/Kg	☼	05/14/18 13:10	05/29/18 13:28	
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS	73		50 - 150				•	05/29/18 13:28	
13C4-PFHpA	78		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 13:28	
13C4 PFOA	90		50 - 150					05/29/18 13:28	
13C5 PFNA	75		50 - 150					05/29/18 13:28	
1802 PFHxS	72		50 - 150 50 - 150					05/29/18 13:28	
13C4 PFOS	61		50 - 150 50 - 150					05/29/18 13:28	
Method: EPA 537 (Mod) - PFAS	S for QSM !	5.1. Table B	-15 - DL2						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil F
Perfluoroheptanoic acid (PFHpA)	29	<u>U</u> *	43	11	ug/Kg	<u> </u>	05/14/18 13:10	05/29/18 12:25	1
Perfluorooctanoic acid (PFOA)	29	U M *	43	14	ug/Kg	☼	05/14/18 13:10	05/29/18 12:25	1
Perfluorononanoic acid (PFNA)	29		43		ug/Kg	₽	05/14/18 13:10		1
Perfluorobutanesulfonic acid (PFBS)	26		57		ug/Kg		05/14/18 13:10		1
Perfluorohexanesulfonic acid		JD *	43		ug/Kg	₽		05/29/18 12:25	1
PFHxS) Perfluorooctanesulfonic acid PFOS)	1600	<b>D</b> J K01	140	34	ug/Kg	₽	05/14/18 13:10	05/29/18 12:25	1
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS		M	50 - 150				05/14/18 13:10	05/29/18 12:25	1
	72		50 - 150				05/14/18 13:10	05/29/18 12:25	1
13C4-PFHpA							05/14/18 13:10		1
'	78		50 - 150				00/17/10 10.10	00/29/10 12.23	
13C4 PFOA									
13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS	78 78 64		50 - 150 50 - 150 50 - 150				05/14/18 13:10	05/29/18 12:25 05/29/18 12:25	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA07-SD1-01 Lab Sample ID: 320-39023-43

 Date Collected: 05/06/18 11:30
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 92.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.22	U	0.32	0.084	ug/Kg	₩	05/14/18 13:10	06/07/18 00:52	1
Perfluorooctanoic acid (PFOA)	0.22	U	0.32	0.11	ug/Kg	☼	05/14/18 13:10	06/07/18 00:52	1
Perfluorononanoic acid (PFNA)	0.22	U	0.32	0.088	ug/Kg	₽	05/14/18 13:10	06/07/18 00:52	1
Perfluorobutanesulfonic acid (PFBS)	0.19	U	0.43	0.064	ug/Kg	\$	05/14/18 13:10	06/07/18 00:52	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	U	0.32	0.067	ug/Kg	₽	05/14/18 13:10	06/07/18 00:52	1
Perfluorooctanesulfonic acid (PFOS)	1.5	U F04	1.1	0.26	ug/Kg	₽	05/14/18 13:10	06/07/18 00:52	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4-PFHpA	80		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C5 PFNA	82		50 - 150				05/14/18 13:10	06/07/18 00:52	1
1802 PFHxS	73		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4 PFOS	75		50 <sub>-</sub> 150				05/14/18 13:10	00/07/40 00 50	

Client Sample ID: ER-01 Lab Sample ID: 320-39023-44

Date Collected: 05/01/18 15:30 Matrix: Water Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.51	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorooctanoic acid (PFOA)	1.7		1.7	0.46	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorononanoic acid (PFNA)	1.3	U	1.7	0.44	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorobutanesulfonic acid (PFBS)	0.40	JM J	1.7	0.39	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorohexanesulfonic acid (PFHxS)	1.9		1.7	0.32	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorooctanesulfonic acid (PFOS)	8.7		3.4	0.93	ng/L		05/15/18 12:48	05/21/18 14:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C4-PFHpA	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C4 PFOA	90		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C5 PFNA	92		50 - 150				05/15/18 12:48	05/21/18 14:03	1
1802 PFHxS	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1

Client Sample ID: FB-01 Lab Sample ID: 320-39023-45

50 - 150

82

Date Collected: 05/01/18 15:50 Matrix: Water Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	U	1.7	0.51	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorooctanoic acid (PFOA)	1.2	U	1.7	0.45	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorononanoic acid (PFNA)	1.2	U	1.7	0.43	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorobutanesulfonic acid (PFBS)	0.83	U	1.7	0.38	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorohexanesulfonic acid (PFHxS)	0.61	<b>J</b> U F06	1.7	0.32	ng/L		05/15/18 12:48	05/19/18 06:46	1

05/15/18 12:48 05/21/18 14:03

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: FB-01 Lab Sample ID: 320-39023-45

Date Collected: 05/01/18 15:50 Matrix: Water Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	1.7	J	3.3	0.91	ng/L		05/15/18 12:48	05/19/18 06:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	91		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C4-PFHpA	101		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C4 PFOA	94		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C5 PFNA	105		50 - 150				05/15/18 12:48	05/19/18 06:46	1
1802 PFHxS	93		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C4 PFOS	95		50 - 150				05/15/18 12:48	05/19/18 06:46	1

Client Sample ID: ER-02

Date Collected: 05/02/18 09:40

Lab Sample ID: 320-39023-46

Matrix: Water

Date Collected: 05/02/18 09:40 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.3	U	1.7	0.53	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorooctanoic acid (PFOA)	0.52	J M J	1.7	0.47	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorononanoic acid (PFNA)	1.3	U	1.7	0.45	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorobutanesulfonic acid (PFBS)	0.87	U	1.7	0.40	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	<b>J</b> U F06	1.7	0.33	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorooctanesulfonic acid (PFOS)	4.4	M =	3.5	0.96	ng/L		05/16/18 14:51	05/28/18 09:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4-PFHpA	71		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4 PFOA	80		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C5 PFNA	84		50 - 150				05/16/18 14:51	05/28/18 09:29	1
1802 PFHxS	75		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4 PFOS	77		50 - 150				05/16/18 14:51	05/28/18 09:29	1

Client Sample ID: ER-03

Date Collected: 05/03/18 10:30

Lab Sample ID: 320-39023-47

Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.3	U	1.8	0.55	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorooctanoic acid (PFOA)	1.3	U	1.8	0.49	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorononanoic acid (PFNA)	1.3	U	1.8	0.47	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorobutanesulfonic acid (PFBS)	0.90	U	1.8	0.41	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorohexanesulfonic acid (PFHxS)	0.90	U	1.8	0.34	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	0.99	ng/L		05/17/18 14:42	05/25/18 23:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	65		50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C4-PFHpA	66		50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C4 PFOA	69		50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C5 PFNA	71		50 - 150				05/17/18 14:42	05/25/18 23:59	1
1802 PFHxS	63		50 - 150				05/17/18 14:42	05/25/18 23:59	1

TestAmerica Sacramento

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: ER-03 Lab Sample ID: 320-39023-47

Date Collected: 05/03/18 10:30
Date Received: 05/08/18 09:00

64

69

Result Qualifier

24 D \*

62 D \*

Client Sample ID: ER-04

Date Collected: 05/04/18 11:00

Lab Sample ID: 320-39023-48

Matrix: Water

50 - 150

Date Received: 05/09/18 09:20

13C4 PFOS

13C4 PFOS

Analyte

Perfluoroheptanoic acid (PFHpA)

Perfluorooctanoic acid (PFOA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	U	1.9	0.57	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorooctanoic acid (PFOA)	1.4	U M U	1.9	0.50	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorononanoic acid (PFNA)	1.4	U	1.9	0.48	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorobutanesulfonic acid (PFBS)	0.93	U	1.9	0.43	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.46	<b>J</b> U F06	1.9	0.35	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorooctanesulfonic acid (PFOS)	1.3	J	3.7	1.0	ng/L		05/17/18 14:42	05/26/18 00:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C4-PFHpA	70		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C4 PFOA	73		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C5 PFNA	78		50 - 150				05/17/18 14:42	05/26/18 00:15	1
1802 PFHxS	69		50 <sub>-</sub> 150				05/17/18 14:42	05/26/18 00:15	1

50 - 150

Date Collected: 05/06/18 10:30 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	24		1.9	0.58	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorooctanoic acid (PFOA)	57		1.9	0.51	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorononanoic acid (PFNA)	3.9		1.9	0.50	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorobutanesulfonic acid (PFBS)	28		1.9	0.44	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorohexanesulfonic acid (PFHxS)	370	E *	1.9	0.36	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorooctanesulfonic acid (PFOS)	1200	E *	3.8	1.0	ng/L		05/18/18 10:26	05/28/18 12:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	59		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4-PFHpA	60		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4 PFOA	65		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C5 PFNA	61		50 - 150				05/18/18 10:26	05/28/18 12:37	1
1802 PFHxS	58		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4 PFOS	55		50 - 150				05/18/18 10:26	05/28/18 12:37	1

TestAmerica Sacramento

Analyzed

05/18/18 10:26 05/29/18 20:54

05/18/18 10:26 05/29/18 20:54

Dil Fac

10

**Matrix: Water** 

05/17/18 14:42 05/25/18 23:59

05/17/18 14:42 05/26/18 00:15

LOQ

19

19

DL Unit

5.8 ng/L

5.1 ng/L

D

Prepared

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Date Collected: 05/06/18 10:30 Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qual	ifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	14	U M	*	19	5.0	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorobutanesulfonic acid (PFBS)	28	D	*	19	4.4	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorohexanesulfonic acid (PFHxS)	390	D	J K01	19	3.6	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorooctanesulfonic acid (PFOS)	1200	D	J K01	38	10	ng/L		05/18/18 10:26	05/29/18 20:54	10
Isotope Dilution	%Recovery	Qual	ifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	53			50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C4-PFHpA	56			50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C4 PFOA	63			50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C5 PFNA	60			50 - 150				05/18/18 10:26	05/29/18 20:54	10
1802 PFHxS	52			50 - 150				05/18/18 10:26	05/29/18 20:54	10
									05/29/18 20:54	10

Client Sample ID: KLA03-SB-2-01D Lab Sample ID: 320-39023-51

Date Collected: 05/02/18 12:15

Matrix: Solid

Date Received: 05/09/18 09:20

Percent Solids: 78.6

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.38	0.10	ug/Kg	<del>\</del>	05/14/18 13:10	06/07/18 01:00	1
Perfluorooctanoic acid (PFOA)	0.16	J	0.38	0.13	ug/Kg	☼	05/14/18 13:10	06/07/18 01:00	1
Perfluorononanoic acid (PFNA)	0.26	U	0.38	0.10	ug/Kg	₽	05/14/18 13:10	06/07/18 01:00	1
Perfluorobutanesulfonic acid (PFBS)	0.098	J	0.51	0.076	ug/Kg	\$	05/14/18 13:10	06/07/18 01:00	1
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.38	0.080	ug/Kg	₩	05/14/18 13:10	06/07/18 01:00	1
Perfluorooctanesulfonic acid (PFOS)	2.7		1.3	0.31	ug/Kg	₩	05/14/18 13:10	06/07/18 01:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	79		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4-PFHpA	90		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4 PFOA	89		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C5 PFNA	93		50 - 150				05/14/18 13:10	06/07/18 01:00	1
1802 PFHxS	84		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4 PFOS	82		50 - 150				05/14/18 13:10	06/07/18 01:00	1

Client Sample ID: KLA06-SB-2-02D Lab Sample ID: 320-39023-52

Date Collected: 05/01/18 13:50 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 67.8

Analyte	Result Q	ualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.0		0.44	0.12	ug/Kg	₩	05/14/18 13:10	06/07/18 00:21	1
Perfluorooctanoic acid (PFOA)	4.1		0.44	0.15	ug/Kg	₩	05/14/18 13:10	06/07/18 00:21	1
Perfluorononanoic acid (PFNA)	1.8	J G02	0.44	0.12	ug/Kg	☼	05/14/18 13:10	06/07/18 00:21	1
Perfluorobutanesulfonic acid (PFBS)	1.4		0.59	0.087	ug/Kg	₽	05/14/18 13:10	06/07/18 00:21	1
Perfluorohexanesulfonic acid (PFHxS)	41 E	*	0.44	0.091	ug/Kg	☼	05/14/18 13:10	06/07/18 00:21	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB-2-02D	Lab Sample ID: 320-39023-52

 Date Collected: 05/01/18 13:50
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 67.8

Method: EPA 537 (Mod) - PFA Analyte	Result			LOQ		Unit	D	Prepared	Analyzed	Dil Fa
Perfluorooctanesulfonic acid (PFOS)	690	E	*	1.5	0.35	ug/Kg	<del></del>	05/14/18 13:10	06/07/18 00:21	
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	76			50 - 150				05/14/18 13:10	06/07/18 00:21	
13C4-PFHpA	86			50 - 150				05/14/18 13:10	06/07/18 00:21	
13C4 PFOA	83			50 - 150				05/14/18 13:10	06/07/18 00:21	
13C5 PFNA	47	Q		50 - 150				05/14/18 13:10	06/07/18 00:21	
1802 PFHxS	76			50 - 150				05/14/18 13:10	06/07/18 00:21	
13C4 PFOS	44	Q		50 - 150				05/14/18 13:10	06/07/18 00:21	
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, 7	able B	-15 - DL						
Analyte	Result	Qua	ifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	1.4	J D	*	4.4		ug/Kg	₩	05/14/18 13:10	05/29/18 13:36	1
Perfluorooctanoic acid (PFOA)	4.4	D	*	4.4		ug/Kg	₩	05/14/18 13:10		1
Perfluorononanoic acid (PFNA)	1.8	J D	*	4.4	1.2	ug/Kg	₩	05/14/18 13:10	05/29/18 13:36	1
Perfluorobutanesulfonic acid (PFBS)	1.3	J D	*	5.9	0.87	ug/Kg	₿	05/14/18 13:10	05/29/18 13:36	1
Perfluorohexanesulfonic acid (PFHxS)	45	D	J K01	4.4	0.91	ug/Kg	₽	05/14/18 13:10	05/29/18 13:36	1
Perfluorooctanesulfonic acid (PFOS)	1000	E D	*	15	3.5	ug/Kg	☼	05/14/18 13:10	05/29/18 13:36	,
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	66			50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C4-PFHpA	75			50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C4 PFOA	84			50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C5 PFNA	79			50 - 150				05/14/18 13:10	05/29/18 13:36	
1802 PFHxS	71			50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C4 PFOS	62			50 - 150				05/14/18 13:10	05/29/18 13:36	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, 7	able B	-15 - DL2						
Analyte	Result	Qua	ifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	29	U	*	44	12	ug/Kg	☼	05/14/18 13:10	05/29/18 12:33	10
Perfluorooctanoic acid (PFOA)	29	U M	*	44	15	ug/Kg	÷	05/14/18 13:10	05/29/18 12:33	10
Perfluorononanoic acid (PFNA)	29	U	*	44	12	ug/Kg	÷	05/14/18 13:10	05/29/18 12:33	10
	27	U	*	59	8.7	ug/Kg	Þ	05/14/18 13:10	05/29/18 12:33	10
Perfluorobutanesulfonic acid (PFBS)		-	*	44	9.1	ug/Kg	₩	05/14/18 13:10	05/29/18 12:33	10
Perfluorohexanesulfonic acid	46	D								
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	46 1100		J K01	150		ug/Kg	☼	05/14/18 13:10	05/29/18 12:33	10
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) (sotope Dilution	1100 %Recovery	D Qua	J K01	150		ug/Kg	☼	Prepared	Analyzed	Dil Fa
Perfluorohexanesulfonic acid PFHxS) Perfluorooctanesulfonic acid PFOS) Isotope Dilution 13C3-PFBS	1100 %Recovery 51	D Qua	J K01	150 <b>Limits</b> 50 - 150		ug/Kg	❖	<b>Prepared</b> 05/14/18 13:10	Analyzed 05/29/18 12:33	Dil Fa
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) (Sotope Dilution (13C3-PFBS) (13C4-PFHpA)	1100 %Recovery	D Qua	J K01	150		ug/Kg	₩	Prepared 05/14/18 13:10 05/14/18 13:10	Analyzed 05/29/18 12:33 05/29/18 12:33	Dil Fa
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	1100 %Recovery 51	D Qua	J K01	150 <b>Limits</b> 50 - 150		ug/Kg	₩	Prepared 05/14/18 13:10 05/14/18 13:10	Analyzed 05/29/18 12:33	<b>Dil Fa</b>
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	1100 %Recovery 51 64	D Qua	J K01	150  Limits  50 - 150 50 - 150		ug/Kg	**	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed 05/29/18 12:33 05/29/18 12:33	<b>Dil Fa</b>
Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)  Isotope Dilution  13C3-PFBS  13C4-PFHpA  13C4 PFOA  13C5 PFNA  18O2 PFHxS	## 1100 %##	D Qua	J K01	150  Limits  50 - 150  50 - 150  50 - 150		ug/Kg	*	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 12:33  05/29/18 12:33  05/29/18 12:33	10 Dil Fa 10 10 10 10 10

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB2-02D Lab Sample ID: 320-39023-53

 Date Collected: 05/04/18 13:25
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 59.1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	5.6		0.50	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 10:36	
Perfluorooctanoic acid (PFOA)	15		0.50	0.17	ug/Kg	☼	05/14/18 14:03	05/29/18 10:36	
Perfluorononanoic acid (PFNA)	0.34	JM J	0.50	0.14	ug/Kg	☼	05/14/18 14:03	05/29/18 10:36	1
Perfluorobutanesulfonic acid (PFBS)	24		0.67	0.099	ug/Kg		05/14/18 14:03	05/29/18 10:36	1
Perfluorohexanesulfonic acid (PFHxS)	95	E *	0.50	0.10	ug/Kg	₩	05/14/18 14:03	05/29/18 10:36	1
Perfluorooctanesulfonic acid (PFOS)	380	E *	1.7	0.40	ug/Kg	₩	05/14/18 14:03	05/29/18 10:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	78		50 - 150				05/14/18 14:03	05/29/18 10:36	
13C4-PFHpA	78		50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C5 PFNA	71		50 - 150				05/14/18 14:03	05/29/18 10:36	1
1802 PFHxS	73		50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C4 PFOS Method: EPA 537 (Mod) - PFA	60 S for QSM !	5.1, Table B	50 - 150 - <b>15 - DL</b>				05/14/18 14:03	05/29/18 10:36	1
Method: EPA 537 (Mod) - PFA Analyte	S for QSM (	Qualifier	-15 - DL LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	Qualifier  J D *	-15 - DL LOQ 10	2.6	ug/Kg	<del>-</del>	Prepared 05/14/18 14:03	Analyzed 05/29/18 17:38	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 5.5	Qualifier J D * D *	10 10	2.6 3.3	ug/Kg ug/Kg	— <del>□</del>	Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38	<b>Dil Fac</b> 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM ! Result 5.5 14 6.7	Qualifier J D * D * U M *	10 10	2.6 3.3 2.7	ug/Kg ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38	20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result 5.5	Qualifier J D * D * U M *	10 10	2.6 3.3 2.7	ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38	20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM ! Result 5.5 14 6.7	Qualifier  J D *  D *  U M *  D *  D *	10 10	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM ( Result 5.5 14 6.7 23	Qualifier  J D *  D *  U M *  D *  D *	10 10 13	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM (Result 5.5 14 6.7 23 110 490 %Recovery	Qualifier  JD * D * UM * D * D JK01 D JK01 Qualifier	10 10 10 10 10	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM (Result 5.5 14 6.7 23 110 490 %Recovery	Qualifier  J D *  D *  U M *  D *  D J K01  D J K01	10 10 13 10 33	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM (Result 5.5 14 6.7 23 110 490 %Recovery	Qualifier  JD * D * UM * D * D JK01 D JK01 Qualifier	10 10 13 10 33 <i>Limits</i>	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	S for QSM 4 Result 5.5 14 6.7 23 110 490  **Recovery** 74	Qualifier  JD * D * UM * D * D JK01 D JK01 Qualifier	10 10 13 10 33 Limits 50 - 150	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  4nalyzed  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM 4 Result 5.5 14 6.7 23 110 490  **Recovery 74 72	Qualifier  JD * D * UM * D * D JK01 D JK01 Qualifier	10 10 10 13 10 33 Limits 50 - 150 50 - 150	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM 4 Result 5.5 14 6.7 23 110 490  **Recovery 74 72 86	Qualifier  JD * D * UM * D * D JK01 D JK01 Qualifier	10 10 10 10 10 10 10 10 10 10 10 10 10 1	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	<b>Dil Fac</b> 20 20

Client Sample ID: KLA02-SB1-02D Lab Sample ID: 320-39023-54

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.11	J	0.39	0.10	ug/Kg	₩	05/14/18 14:03	05/29/18 10:43	1
Perfluorooctanoic acid (PFOA)	0.25	JM J	0.39	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 10:43	1
Perfluorononanoic acid (PFNA)	0.26	UM U	0.39	0.11	ug/Kg	₽	05/14/18 14:03	05/29/18 10:43	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.52	0.077	ug/Kg	\$	05/14/18 14:03	05/29/18 10:43	1
Perfluorohexanesulfonic acid (PFHxS)	1.7		0.39	0.081	ug/Kg	₽	05/14/18 14:03	05/29/18 10:43	1
Perfluorooctanesulfonic acid (PFOS)	12		1.3	0.31	ug/Kg	₽	05/14/18 14:03	05/29/18 10:43	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB1-02D Lab Sample ID: 320-39023-54

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.9

Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	73	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4-PFHpA	83	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4 PFOA	91	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C5 PFNA	96	50 - 150	05/14/18 14:03	05/29/18 10:43	1
18O2 PFHxS	81	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4 PFOS	80	50 - 150	05/14/18 14:03	05/29/18 10:43	1

Client Sample ID: KLA05-SB1-01D Lab Sample ID: 320-39023-55

Date Received: 05/09/18 09:20									Percent Solid	s: 82.2
Method: EPA 537 (Mod) - PFA	S for QSM (			-15 LOQ	DI	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	1.8	Qua	iiiiei –	0.37		ug/Kg	— <del>=</del>	05/14/18 13:10	•	1 Tac
Perfluoroheptanoic acid (PFHpA)	1.8			0.37			₩	05/14/18 13:10		1
Perfluorooctanoic acid (PFOA)						ug/Kg	≎			-
Perfluorononanoic acid (PFNA)	2.8			0.37		ug/Kg		05/14/18 13:10		
Perfluorobutanesulfonic acid (PFBS)	3.1			0.49		ug/Kg	₽	05/14/18 13:10		1
Perfluorohexanesulfonic acid (PFHxS)	170	Е	*	0.37	0.076	ug/Kg	☼	05/14/18 13:10	06/07/18 00:29	1
Perfluorooctanesulfonic acid (PFOS)	390	E	*	1.2	0.29	ug/Kg	₽	05/14/18 13:10	06/07/18 00:29	1
Isotope Dilution	%Recovery	Qua	lifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	77			50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C4-PFHpA	64			50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C4 PFOA	84			50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C5 PFNA	56			50 - 150				05/14/18 13:10	06/07/18 00:29	1
1802 PFHxS	64			50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C4 PFOS	57			50 - 150				05/14/18 13:10	06/07/18 00:29	1
Method: EPA 537 (Mod) - PFA				15 - DL		11				
Analyte	Result	Qua	llitier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	Result 24		ilitier *	LOQ 37		ug/Kg	— D ⊕	05/14/18 13:10	•	Dil Fac
	24		*		9.5				05/29/18 12:41	
Perfluoroheptanoic acid (PFHpA)	24	U J D	*	37	9.5 12	ug/Kg	<del></del>	05/14/18 13:10	05/29/18 12:41 05/29/18 12:41	100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)	24 13	U J D U	*	37 37	9.5 12 9.9	ug/Kg ug/Kg ug/Kg	<del></del>	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41	100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid	24 13 24	U <b>J D</b> U	* * *	37 37 37	9.5 12 9.9 7.2	ug/Kg ug/Kg	— <del>\$</del> \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)	24 13 24 22	U D	* * * * * *	37 37 37 37 49	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100 100 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid	24 13 24 22 300	U J D U U D	* * * J K01 J K01	37 37 37 49 37	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)	24 13 24 22 300 650	U J D U D D Qua	* * * J K01 J K01	37 37 37 49 37	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100 100 100 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)  Isotope Dilution	24 13 24 22 300 650 %Recovery	U J D U D D Qua	* * * J K01 J K01	37 37 37 49 37 120	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100 100 100 100 <b>Dil Fac</b>
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)  Isotope Dilution  13C3-PFBS	24 13 24 22 300 650 %Recovery	U J D U D D Qua	* * * J K01 J K01	37 37 37 49 37 120 <b>Limits</b> 50 - 150	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 <i>Analyzed</i> 05/29/18 12:41	100 100 100 100 100 100 <b>Dil Fac</b> 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)  Isotope Dilution  13C3-PFBS  13C4-PFHpA	24 13 24 22 300 650 **Recovery 82 69	U J D U D D Qua	* * * J K01 J K01	37 37 37 49 37 120 <b>Limits</b> 50 - 150 50 - 150	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 Analyzed 05/29/18 12:41 05/29/18 12:41	100 100 100 100 100 100
Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorononanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFOS)  Isotope Dilution  13C3-PFBS  13C4-PFHpA  13C4 PFOA	24 13 24 22 300 650  **Recovery 82 69 81	U J D U D D Qua	* * * J K01 J K01	37 37 49 37 120 <b>Limits</b> 50 - 150 50 - 150 50 - 150	9.5 12 9.9 7.2 7.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	**	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41 Analyzed 05/29/18 12:41 05/29/18 12:41 05/29/18 12:41	100 100 100 100 100 100 100 100 100

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: ER-05 Lab Sample ID: 320-39023-56

Date Collected: 05/06/18 16:00 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	U	1.9	0.58	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorooctanoic acid (PFOA)	0.74	J M J	1.9	0.51	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorononanoic acid (PFNA)	1.4	U	1.9	0.49	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorobutanesulfonic acid (PFBS)	0.52	J	1.9	0.44	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorohexanesulfonic acid (PFHxS)	3.4	U F06	1.9	0.36	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorooctanesulfonic acid (PFOS)	13		3.8	1.0	ng/L		05/18/18 10:26	05/29/18 21:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	84		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4-PFHpA	93		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4 PFOA	98		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C5 PFNA	104		50 - 150				05/18/18 10:26	05/29/18 21:18	1
18O2 PFHxS	87		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4 PFOS	91		50 <sub>-</sub> 150				05/18/18 10:26	05/29/18 21:18	1

Client Sample ID: IDW-KINGSLEY-SO-LDOS01 Lab Sample ID: 320-39023-57

Date Collected: 05/07/18 09:45

Date Received: 05/08/18 09:00

Matrix: Solid

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/29/18 15:26	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/29/18 15:26	1
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/29/18 15:26	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/29/18 15:26	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/29/18 15:26	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/29/18 15:26	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/29/18 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		78 - 120			-		05/29/18 15:26	1
1,2-Dichloroethane-d4 (Surr)	98		64 - 129					05/29/18 15:26	1
4-Bromofluorobenzene (Surr)	90		78 - 121					05/29/18 15:26	1
Dibromofluoromethane (Surr)	103		79 - 119					05/29/18 15:26	1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:55	05/25/18 21:36	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:55	05/25/18 21:36	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:55	05/25/18 21:36	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:55	05/25/18 21:36	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:55	05/25/18 21:36	1

TestAmerica Sacramento

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: IDW-KINGSLEY-SO-LDOS01

Date Collected: 05/07/18 09:45 Matrix: Solid

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		05/21/18 08:55	05/25/18 21:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		49 - 120				05/21/18 08:55	05/25/18 21:36	1
2-Fluorophenol (Surr)	90		50 - 120				05/21/18 08:55	05/25/18 21:36	1
2,4,6-Tribromophenol (Surr)	97		51 - 120				05/21/18 08:55	05/25/18 21:36	1
Nitrobenzene-d5 (Surr)	88		51 - 120				05/21/18 08:55	05/25/18 21:36	1
Phenol-d5 (Surr)	78		47 - 120				05/21/18 08:55	05/25/18 21:36	1
Terphenyl-d14 (Surr)	94		56 <sub>-</sub> 120				05/21/18 08:55	05/25/18 21:36	1

Client Sample ID: IDW-KINGSLEY-WA-LDOS01 Lab Sample ID: 320-39023-58

Date Collected: 05/07/18 09:30 Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/21/18 17:50	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/21/18 17:50	1
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/21/18 17:50	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/21/18 17:50	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/21/18 17:50	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/21/18 17:50	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/21/18 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		78 - 120					05/21/18 17:50	1
1,2-Dichloroethane-d4 (Surr)	109		64 - 129					05/21/18 17:50	1
4-Bromofluorobenzene (Surr)	95		78 - 121					05/21/18 17:50	1
Dibromofluoromethane (Surr)	103		79 - 119					05/21/18 17:50	1

4-Bromondorobenzene (San)	30		10-121					00/21/10 11.00	,
Dibromofluoromethane (Surr)	103		79 - 119					05/21/18 17:50	1
Method: 8270D - Semivolatil	e Organic Co	mpounds	(GC/MS) - T	CLP					
Analyte	Result	Qualifier	LÓQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:46	05/25/18 20:46	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:46	05/25/18 20:46	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:46	05/25/18 20:46	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:46	05/25/18 20:46	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:46	05/25/18 20:46	1
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4,5-Trichlorophenol	0.0050	UM	0.050	0.0022	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4,6-Trichlorophenol	0.0050	UM	0.025	0.0014	mg/L		05/21/18 08:46	05/25/18 20:46	1
					•				

Lab Sample ID: 320-39023-57

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: IDW-KINGSLEY-WA-LDOS01

Lab Sample ID: 320-39023-58

Date Collected: 05/07/18 09:30 **Matrix: Water** Date Received: 05/08/18 09:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	68		49 - 120	05/21/18 08:46	05/25/18 20:46	1
2-Fluorophenol (Surr)	51		50 - 120	05/21/18 08:46	05/25/18 20:46	1
2,4,6-Tribromophenol (Surr)	92		51 - 120	05/21/18 08:46	05/25/18 20:46	1
Nitrobenzene-d5 (Surr)	56		51 - 120	05/21/18 08:46	05/25/18 20:46	1
Phenol-d5 (Surr)	51		47 - 120	05/21/18 08:46	05/25/18 20:46	1
Terphenyl-d14 (Surr)	90		56 - 120	05/21/18 08:46	05/25/18 20:46	1
<u></u>						

Client Sample ID: KLA07-SD1-01D Lab Sample ID: 320-39023-59

Date Collected: 05/06/18 11:30 **Matrix: Solid** Percent Solids: 73.7 Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.12	J	0.40	0.10	ug/Kg	☆	05/19/18 09:21	05/31/18 02:30	1
Perfluorooctanoic acid (PFOA)	0.48		0.40	0.13	ug/Kg	☼	05/19/18 09:21	05/31/18 02:30	1
Perfluorononanoic acid (PFNA)	0.27	U	0.40	0.11	ug/Kg	☼	05/19/18 09:21	05/31/18 02:30	1
Perfluorobutanesulfonic acid (PFBS)	0.20	J	0.54	0.079	ug/Kg	₩	05/19/18 09:21	05/31/18 02:30	1
Perfluorohexanesulfonic acid (PFHxS)	2.1		0.40	0.083	ug/Kg	*	05/19/18 09:21	05/31/18 02:30	1
Perfluorooctanesulfonic acid (PFOS)	15	J1 =	1.3	0.32	ug/Kg	☼	05/19/18 09:21	05/31/18 02:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	73		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4-PFHpA	81		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4 PFOA	88		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C5 PFNA	94		50 - 150				05/19/18 09:21	05/31/18 02:30	1
1802 PFHxS	79		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4 PFOS	78		50 <sub>-</sub> 150				05/19/18 09:21	05/31/18 02:30	1

# APPENDIX E LABORATORY ANALYTICAL DATA REPORTS

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#### **ANALYTICAL REPORT**

Job Number: 320-39023-1

Job Description: Phase III, ANG-Kingsley

For: Leidos, Inc. 11251 Roger Bacon Drive Reston, VA 20190

Attention: Selvam Arunachalam

Approved for release David R Alltucker Project Manager I 6/13/2018 2:08 PM

David R Alltucker, Project Manager I 880 Riverside Parkway, West Sacramento, CA, 95605 (916)374-4383 david.alltucker@testamericainc.com 06/13/2018



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## **Definitions/Glossary**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Qualifiers

#### **GC/MS VOA**

Qualifier Qualifier Description

Undetected at the Limit of Detection.

#### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

J Estimated: The analyte was positively identified; the quantitation is an estimation

#### **LCMS**

Qualifier	Qualifier Description
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
E	Result exceeded calibration range.
D	The reported value is from a dilution.
U	Undetected at the Limit of Detection.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

#### **Glossary**

TEQ

Toxicity Equivalent Quotient (Dioxin)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

# Job Narrative 320-39023-1

#### Receipt

The samples were received on 5/8/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.9° C.

#### **Receipt Exceptions**

The container label time for the following samples did not match the information listed on the Chain-of-Custody (COC): IDW-KINGSLEY-SO-LDOS01 (320-39023-57). The container time lists 09:40, while the COC lists 09:45.

Samples #33 and #55 were labeled the same, neither label had indication it was a Duplicate. The label that was hand written #55 was used as the duplicate sample. KLA05-SB1-01 (320-39023-33) and KLA05-SB1-01D (320-39023-55)

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### **LCMS**

Method(s) 537 (modified), EPA 537 (Mod), EPA 537(Mod): The first level standard from the initial calibration curve is used to evaluate the tune criteria. The instrument mass windows are set at +/- 0.5amu; therefore, detection of the analyte serves as verification that the assigned mass is within +/- 0.5amu of the true value, which meets the DoD/DOE QSM tune criterion.

Method(s) EPA 537 (Mod): Isotope dilution analyte (IDA) recovery was outside acceptance limits for the following matrix spike (MS) sample: (320-38935-A-32-B MS). The parent sample's surrogate recovery was within limits. The MS sample has been qualified and reported.

Method(s) EPA 537 (Mod): The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 320-223615 and analytical batch 320-225818 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Perfluorobutanesulfonic acid (PFBS), Perfluorohexanesulfonic acid (PFHxS), Perfluorohexanoic acid (PFHxA) and Perfluorooctanoic acid (PFOA) in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) EPA 537 (Mod): Due to the high concentration of Perfluorobutanesulfonic acid (PFBS), Perfluorohexanesulfonic acid (PFHxS), Perfluorohexanoic acid (PFHxA) and Perfluoroctanoic acid (PFOA), the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-223615 and analytical batch 320-225818 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) EPA 537 (Mod): The matrix spike / matrix spike duplicate (MS/MSD) recoveries for multi analytes for preparation batch 320-223091 and analytical batch 320-227681 were outside control limits. Sample matrix interference are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) EPA 537 (Mod): Due to the high concentration of Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS), the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-223091 and analytical batchs 320-227681 and 320-226044 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) EPA 537 (Mod): Due to the high concentration of several analytes, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-224065 and analytical batch 320-226055 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) EPA 537 (Mod): Due to the high concentration of Perfluorooctanesulfonic acid (PFOS), the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-224254 and analytical batch 320-226343 could not be evaluated for accuracy and precision for this analyte. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) EPA 537 (Mod): The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-224065 and analytical batch 320-225820 were outside control limits for several analytes. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) EPA 537 (Mod): The matrix spike duplicate (MSD) recovery for preparation batch 320-223092 and analytical batch 320-225899 was outside control limits for Perfluorooctanesulfonic acid (PFOS). Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) EPA 537 (Mod): The concentration of Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: MW-KLA01-01-01 (320-39023-1), MW-KLA03-01-01 (320-39023-3), MW-572-02-PRL05-01 (320-39023-6) and MW-572-02-PRL05-01D (320-39023-49). This analyte has been qualified; however, the peaks did not saturate the instrument detector. A dilution was performed to bring the concentration of this analyte within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of several analytes associated with the following samples exceeded the instrument calibration range: MW-KLA02-01-01 (320-39023-2), MW-573-03-PRL05-01 (320-39023-5), MW-573-01 (320-39025-5), MW-573-01 (320-39025-5), MW-573-01 (320-39025-5), MW-5

MW-573-03-PRL05-01 (320-39023-5[MSD]) and MW-KLA06-01-01 (320-39023-7). These analytes have been qualified; however, the peaks did not saturate the instrument detector. A dilution was performed to bring the concentration of these analytes within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of Perfluorohexanesulfonic acid (PFHxS) associated with the following sample exceeded the instrument calibration range: MW-KLA04-01-01 (320-39023-4). This analyte has been qualified; however, the peak did not saturate the instrument detector. This sample has been diluted to bring the concentration of PFHxS within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: MW-573-03-PRL05-01 (320-39023-5), MW-573-03-PRL05-01 (320-39023-5[MS]), MW-573-03-PRL05-01 (320-39023-5[MSD]) and MW-KLA06-01-01 (320-39023-7). These analytes have been qualified; however, the peaks did not saturate the instrument detector. These samples have been analyzed at the maximum dilution of 100X and, by client request, were not diluted further to bring the concentration of these analytes within instrument calibration range. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method(s) EPA 537 (Mod): Results for samples KLA-01-SB1-01 (320-39023-9), KLA-01-SB1-02 (320-39023-10), KLA06-SB1-01 (320-39023-39), KLA06-SB1-02 (320-39023-40), KLA06-SB2-01 (320-39023-41), KLA06-SB2-01 (320-39023-41[MSD]), KLA06-SB2-02 (320-39023-42), KLA06-SB2-02 (320-39023-52) and KLA05-SB1-01D (320-39023-55) were reported from the analysis of a diluted extract due to high concentration of target analytes in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method(s) EPA 537 (Mod): The concentration of Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: KLA-01-SB1-01 (320-39023-9), KLA-01-SB1-02 (320-39023-10), KLA06-SB1-01 (320-39023-39) and KLA06-SB1-02 (320-39023-40). This analyte has been qualified; however, the peaks did not saturate the instrument detector. These samples have been diluted to bring the concentration of PFOS within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): Results for samples KLA02-SB2-01 (320-39023-17), KLA02-SB2-02 (320-39023-18), KLA02-SB3-01 (320-39023-19), KLA04-SB1-01 (320-39023-27), KLA04-SB1-02 (320-39023-28), KLA04-SB2-01 (320-39023-29), KLA04-SB2-02 (320-39023-30), KLA04-SB3-01 (320-39023-31), KLA04-SB3-02 (320-39023-32), KLA05-SB1-01 (320-39023-33), KLA05-SB2-01 (320-39023-35), KLA05-SB2-02 (320-39023-36), KLA05-SB3-01 (320-39023-37), KLA05-SB3-02 (320-39023-38) and KLA02-SB2-02D (320-39023-53) were reported from the analysis of a diluted extract due to high concentration of target analytes in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method(s) EPA 537 (Mod): The concentration of Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: KLA02-SB2-01 (320-39023-17), KLA02-SB3-01 (320-39023-19), KLA04-SB1-01 (320-39023-27), KLA05-SB2-01 (320-39023-35), KLA05-SB2-02 (320-39023-36) and KLA05-SB3-02 (320-39023-38). This analyte has been qualified; however, the peaks did not saturate the instrument detector. These samples have been diluted to bring the concentration of target analytes within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: KLA02-SB2-02 (320-39023-18), KLA04-SB1-02 (320-39023-28), KLA04-SB3-01 (320-39023-31), KLA05-SB1-01 (320-39023-33) and KLA02-SB2-02D (320-39023-53). These analytes have been qualified; however, the peaks did not saturate the instrument detector. These samples have been diluted to bring the concentration of target analytes within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: KLA04-SB1-02 (320-39023-28), KLA04-SB3-01 (320-39023-31), KLA05-SB3-01 (320-39023-37) and KLA05-SB3-02 (320-39023-38). This analyte has been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range. The maximum dilution was performed. The client was contacted and permission was given to report with an "E" qualifier.

Method(s) EPA 537 (Mod): Results for samples KLA04-SB1-02 (320-39023-28) and KLA04-SB3-01 (320-39023-31) were reported from the analysis of a diluted extract due to high concentration of Perfluorooctanesulfonic acid (PFOS) in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method(s) EPA 537 (Mod): The concentration of several analytes associated with the following samples exceeded the instrument calibration range: KLA04-SB2-01 (320-39023-29), KLA04-SB2-02 (320-39023-30), KLA04-SB3-02 (320-39023-32) and KLA05-SB3-01 (320-39023-37). These analytes have been qualified; however, the peaks did not saturate the instrument detector. These samples have been diluted to bring the concentration of target analytes within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The concentration of Perfluorohexanesulfonic acid (PFHxS) and Perfluorooctanesulfonic acid (PFOS) associated with the following samples exceeded the instrument calibration range: KLA06-SB2-01 (320-39023-41), KLA06-SB2-01 (320-39023-41[MSD]), KLA06-SB2-02 (320-39023-42), KLA06-SB2-02 (320-39023-52) and KLA05-SB1-01D (320-39023-55). These analytes have been qualified; however, the peaks did not saturate the instrument detector.

These samples have been diluted to bring the concentration of these analytes within instrument calibration range and both sets of data have been reported.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for 13C4 PFOS and 18O2 PFHxS: (320-38935-A-32-B MS). Matrix interference is suspected because these samples were diluted due to high target analytes and the IDA recoveries in the analysis of the diluted extract were within method recommended limits. Both sets of data have been reported. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method(s) EPA 537 (Mod): Internal standard (ISTD) responses for the following samples were outside control limits: MW-KLA02-01-01 (320-39023-2), MW-573-03-PRL05-01 (320-39023-5), MW-573-03-PRL05-01 (320-39023-5[MS]), MW-573-03-PRL05-01 (320-39023-5[MSD]) and MW-KLA06-01-01 (320-39023-7). Matrix interference is suspected because the samples were diluted to bring the concentrations of several target analytes within instrument calibration range and the ISTD responses in the analysis of the diluted extracts were within control limits.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C4-PFHpA and 13C4 PFOS: MW-573-03-PRL05-01 (320-39023-5), MW-573-03-PRL05-01 (320-39023-5[MSD]), MW-573-03-PRL05-01 (320-39023-5[MSD]) and MW-KLA06-01-01 (320-39023-7). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for several analytes: MW-KLA02-01-01 (320-39023-2). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C4 PFOS: MW-KLA02-01-01 (320-39023-2) and MW-KLA06-01-01 (320-39023-7). Interference from the native analyte is suspected due to the high levels of PFOS in the sample. By client request, a larger dilution was not performed to bring the concentration of the target analyte within calibration range. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C4 PFOS: KLA-01-SB1-01 (320-39023-9), KLA06-SB2-01 (320-39023-41[MS]), KLA06-SB2-01 (320-39023-41[MSD]), KLA06-SB2-02 (320-39023-42) and KLA06-SB2-02D (320-39023-52). Matrix interference is suspected because these samples were diluted due to high targets and the IDA recoveries associated with the diluted extracts were within method recommended limits. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C5 PFNA: KLA06-SB2-01 (320-39023-41[MS]), KLA06-SB2-01 (320-39023-41[MSD]) and KLA06-SB2-02 (320-39023-42). Sample matrix interference is suspected because the samples were diluted due to high targets and the IDA recoveries associated with the diluted extracts are within the method recommended limits. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C5 PFNA and 13C4 PFOS: KLA04-SB1-01 (320-39023-27), KLA04-SB1-02 (320-39023-28), KLA04-SB2-01 (320-39023-29) and KLA04-SB3-01 (320-39023-31). Sample matrix interference is suspected because these samples were diluted to bring the concentration of target analytes within instrument calibration range and IDA recoveries in the diluted extracts were within method recommended limits. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit for 13C4 PFOS: KLA04-SB2-02 (320-39023-30), KLA04-SB3-02 (320-39023-32) and KLA05-SB3-02 (320-39023-38). Sample matrix interference is suspected because these samples were diluted to bring the concentration of target analytes within instrument calibration range and IDA recoveries in the diluted extracts were within method recommended limits. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the samples.

Method(s) EPA 537 (Mod): The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit for several analytes: KLA05-SB3-01 (320-39023-37). Sample matrix interference is suspected because this sample was diluted to bring the concentration of target analytes within instrument calibration range and IDA recoveries in the diluted extract were within method recommended limits. Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **Organic Prep**

Method(s) 3535: The following sample: MW-KLA01-01-01 (320-39023-1), MW-KLA02-01-01 (320-39023-2), MW-KLA03-01-01 (320-39023-3), MW-KLA04-01-01 (320-39023-4) and MW-KLA06-01-01 (320-39023-7) in preparation batch 320-224065 was observed to be a yellow color prior to extraction.

Method(s) 3535: The following samples: MW-KLA01-01-01 (320-39023-1), MW-KLA02-01-01 (320-39023-2), MW-KLA03-01-01 (320-39023-3), MW-KLA04-01-01 (320-39023-4) and MW-KLA06-01-01 (320-39023-7) in preparation batch 320-224065 were centrifuged prior to preparation due to having sediment present, which could potentially clog the solid-phase column.

Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-224509.

Method(s) 3535: The following samples: KLA08-SW1-01 (320-39023-8) in preparation batch 320-224509 were observed to be a yellow color prior to extraction.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

### Client Sample ID: MW-KLA01-01-01

## Lab Sample ID: 320-39023-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	7.6		1.9	0.59	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	20		1.9	0.52	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.56	J M	1.9	0.50	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	39	M	1.9	0.44	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	220		1.9	0.37	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	510	E	3.9	1.1	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	7.5	JD	9.7	2.9	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	22	D	9.7	2.6	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	40	D M	9.7	2.2	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	230	D	9.7	1.8	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	500	D	19	5.3	ng/L	5		EPA 537 (Mod)	Total/NA

## Client Sample ID: MW-KLA02-01-01

## Lab Sample ID: 320-39023-2

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	7300	E	1.8	0.55	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	13000	EM	1.8	0.49	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	340	M	1.8	0.47	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1500	ΕM	1.8	0.42	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14000	EM	1.8	0.34	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	88000	EM	3.6	1.0	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	7700	D	180	55	ng/L	100		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	21000	D	180	49	ng/L	100		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	340	D M	180	47	ng/L	100		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	9700	D	180	42	ng/L	100		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	66000	ED	180	34	ng/L	100		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	380000	ED	360	100	ng/L	100		EPA 537 (Mod)	Total/NA

### Client Sample ID: MW-KLA03-01-01

### Lab Sample ID: 320-39023-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	200		2.0	0.61	ng/L		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	290		2.0	0.54	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	16	M	2.0	0.52	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	180		2.0	0.46	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1800	E	2.0	0.38	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5200	E	4.0	1.1	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	190	D	100	30	ng/L	50	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	300	D	100	27	ng/L	50	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	170	D	100	23	ng/L	50	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	2700	D	100	19	ng/L	50	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) -	6100	D M	200	55	ng/L	50	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA04-01-01

### Lab Sample ID: 320-39023-4

TestAmerica Job ID: 320-39023-1

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	27		2.0	0.60	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	41		2.0	0.53	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	96		2.0	0.45	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	610	E	2.0	0.38	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	100		4.0	1.1	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	31	D	9.9	3.0	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	43	D	9.9	2.7	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	95	D	9.9	2.3	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	690	D	9.9	1.9	ng/L	5		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	100	D	20	5.4	ng/L	5		EPA 537 (Mod)	Total/NA

## Client Sample ID: MW-573-03-PRL05-01

### Lab Sample ID: 320-39023-5

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	4400	E J1	2.0	0.60	ng/L		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	4700	E J1	2.0	0.54	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	200	J1	2.0	0.52	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1900	E J1 M	2.0	0.46	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	12000	E J1	2.0	0.38	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	32000	J1 E M	4.0	1.1	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	5100	J1 D	200	60	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	6700	J1 D	200	54	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	190	J J1 D M	200	52	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	3900	J1 D	200	46	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	39000	E J1 D	200	38	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	63000	J1 E D	400	110	ng/L	100	EPA 537 (Mod)	Total/NA

## Client Sample ID: MW-572-02-PRL05-01

## Lab Sample ID: 320-39023-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	O Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	25		1.9	0.57	ng/L		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	56		1.9	0.51	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	3.8		1.9	0.49	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	27		1.9	0.43	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	360	E	1.9	0.36	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1100	EM	3.8	1.0	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	23	D	19	5.7	ng/L	10	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	55	D	19	5.1	ng/L	10	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	27	D	19	4.3	ng/L	10	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	360	D	19	3.6	ng/L	10	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DI	1100	D	38	10	ng/L	10	EPA 537 (Mod)	Total/NA

## Client Sample ID: MW-KLA06-01-01

Lab Sample ID: 320-39023-7

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

### Client Sample ID: MW-KLA06-01-01 (Continued)

## Lab Sample ID: 320-39023-7

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	6100	E	1.9	0.59	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	11000	EM	1.9	0.52	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	500	EM	1.9	0.50	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1600	E	1.9	0.45	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	17000	EM	1.9	0.37	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	57000	E	3.9	1.1	ng/L	1	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL2	5400	D	190	59	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL2	14000	D	190	52	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL2	490	D	190	50	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL2	7900	D	190	45	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	68000	ED	190	37	ng/L	100	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	130000	ED	390	110	ng/L	100	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA08-SW1-01

### Lab Sample ID: 320-39023-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.5	JM	1.9	0.58	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.8	J M	1.9	0.52	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.95	J M	1.9	0.50	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7	M	1.9	0.36	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28	M	3.8	1.1	ng/L	1		EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA-01-SB1-01

## Lab Sample ID: 320-39023-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.38		0.38	0.098	ug/Kg	1	<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.50	0.074	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	18		0.38	0.078	ug/Kg	1	т. Д	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	240	E	1.3	0.30	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	3.9	JDM	7.5	2.5	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	17	D	7.5	1.6	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) -	430	D	25	6.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA-01-SB1-02

### Lab Sample ID: 320-39023-10

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.32	J	0.38	0.10	ug/Kg		\$	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.0		0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.51	0.075	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.1		0.38	0.079	ug/Kg	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	150	E	1.3	0.31	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	9.1	D	7.7	1.6	ug/Kg	20	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) -	210	D	26	6.1	ug/Kg	20	₽	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA-01-S	B2-01					Lab Sa	am	ple ID: 320	-39023-1
_ Analyte	Result	Qualifier	LOQ	DL	Unit			Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.30	J	0.34	0.11	ug/Kg	1	\$	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.072	J	0.45	0.066	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.5		0.34	0.070	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.7		1.1	0.27	ug/Kg	1	₩.	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA-01-S	B2-02					Lab Sa	am	ple ID: 320	-39023-1
_ Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.14	J	0.39	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.39		0.39	0.13	ug/Kg			EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.52	0.077	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.39	0.081	ug/Kg	1	<b></b>	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2	М	1.3		ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA-01-S	B3-01					Lab Sa	am	ple ID: 320	-39023-1
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.22		0.38	0.13	ug/Kg			EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.13		0.51		ug/Kg			EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.38		ug/Kg	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	10		1.3		ug/Kg			EPA 537 (Mod)	Total/NA
-			1.5			Lab Sa		ple ID: 320	-39023-1
Client Sample ID: KLA-01-S  Analyte	B3-02 Result	Qualifier	LOQ	DL	Unit	Dil Fac	an D	nple ID: 320	Prep Type
Client Sample ID: KLA-01-S	B3-02	J		<b>DL</b> 0.078		Dil Fac	am D ≅	ple ID: 320	
Client Sample ID: KLA-01-S  Analyte Perfluorohexanesulfonic acid (PFHxS)	Result 0.32 1.1	J	LOQ 0.38	<b>DL</b> 0.078	Unit ug/Kg	Dil Fac	D	Method EPA 537 (Mod)	Prep Type Total/NA Total/NA
Analyte Perfluoronexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	Result 0.32 1.1	J	LOQ 0.38	<b>DL</b> 0.078 0.30	Unit ug/Kg	Dil Fac 1 1 1 Lab Sa	am D ©	Method EPA 537 (Mod) EPA 537 (Mod)	Prep Type Total/NA Total/NA -39023-1
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE	Result 0.32 1.1	J J Qualifier	LOQ 0.38 1.3	0.078 0.30	Unit ug/Kg ug/Kg	Dil Fac 1 1 Lab Sa	am D = x	Method EPA 537 (Mod) EPA 537 (Mod)	Prep Type Total/NA Total/NA -39023-1
Analyte Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE Analyte	Result 0.32 1.1  31-01  Result	J J Qualifier	0.38 1.3	DL 0.078 0.30 DL 0.10	Unit ug/Kg ug/Kg	Dil Fac  Lab Sa  Dil Fac  Dil Fac	D &	Method EPA 537 (Mod) EPA 537 (Mod) Mple ID: 320 Method	Prep Type Total/NA Total/NA -39023-1
Analyte Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA)	Result 0.32 1.1  31-01  Result 0.16	J J Qualifier J	LOQ 0.38 1.3	DL 0.078 0.30 DL 0.10 0.13	Unit ug/Kg ug/Kg	Dil Fac   1   1     Lab Sa		Method EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA -39023-1 Prep Type Total/NA
Analyte Perfluoronexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	Result 0.32 1.1  81-01  Result 0.16 0.46	J J Qualifier J	LOQ 0.38 1.3 LOQ 0.39 0.39	DL 0.078 0.30 DL 0.10 0.13 0.077	Unit ug/Kg ug/Kg  Unit ug/Kg ug/Kg	Dil Fac  1 1 Lab Sa  Dil Fac 1 1 1 1 1 1	D & &	Method EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)	Prep Type Total/NA Total/NA  -39023-1  Prep Type Total/NA Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25	Qualifier J M J	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081	Unit ug/Kg ug/Kg  Unit ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  1 1 1 Lab Sa  Dil Fac 1 1 1 1 1	D & & & & & & & & & & & & & & & & & & &	Method EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  -39023-1 Prep Type Total/NA Total/NA Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6	Qualifier J M J	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081	Unit ug/Kg ug/Kg  Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  Dil Fac  Dil Fac  1  1  1  1  1  1		Method EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA -39023-1 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanosulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6	Qualifier J M J	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31	Unit ug/Kg ug/Kg  Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  1 1 Lab Sa  Dil Fac 1 1 1 1 1 Lab Sa		Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  -39023-1 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Analyte Perfluoronexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorobexanesulfonic acid (PFHxS) Perfluorooctanoic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6	Qualifier J M J J1	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31	Unit ug/Kg ug/Kg  Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  Dil Fac  Dil Fac  1  1  Lab Sa  Dil Fac  Dil Fac  Dil Fac  Dil Fac		Method EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  -39023-1 Prep Type Total/NA Total/NA Total/NA Total/NA Total/NA Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluoroheptanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6  31-02  Result	Qualifier J J  Qualifier J  Qualifier J	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31	Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  Dil Fac  1  Lab Sa  Dil Fac  1  1  1  Dil Fac  Dil Fac  Dil Fac  Dil Fac		Method EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluoroheptanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA)	Result 0.32 1.1  31-01  Result 0.46 0.25 2.6 7.6  31-02  Result 0.18	Qualifier J J1  Qualifier J J M	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3	DL 0.078 0.30 DL 0.10 0.077 0.081 0.31 DL 0.095 0.12	Unit ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	Dil Fac  Dil Fac  1  Lab Sa  Dil Fac  1  1  1  Lab Sa  Dil Fac  Dil Fac  1  1  1		Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluoroheptanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHxS) Perfluorooctanoic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorohexanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6  31-02  Result 0.18 0.28	Qualifier J J1  Qualifier J J M	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3 LOQ 0.36 0.36	DL 0.078 0.30 DL 0.10 0.077 0.081 0.31 DL 0.095 0.12 0.072	Unit ug/Kg	Dil Fac  Dil Fac  1 1 1 Lab Sa  Dil Fac 1 1 1 1 1 Lab Sa  Dil Fac 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Method EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)  EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA
Analyte Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorooctanoic acid (PFOA)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6  31-02  Result 0.18 0.28 0.22	Qualifier J J1  Qualifier J J M	LOQ 0.38 1.3 LOQ 0.39 0.52 0.39 1.3 LOQ 0.36 0.36 0.49	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31 DL 0.095 0.12 0.072	Unit ug/Kg	Dil Fac    Dil Fac   Dil Fac   1		Method EPA 537 (Mod) EPA 537 (Mod) EPA 537 (Mod)  Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorooctanoic acid (PFHpA) Perfluorooctanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHxS) Perfluorooctanoic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFOS)  Perfluorohexanesulfonic acid (PFHpA) Perfluorohexanesulfonic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFBS)	Result 0.32 1.1  31-01  Result 0.46 0.25 2.6 7.6  31-02  Result 0.18 0.28 0.22 1.6 6.1	Qualifier J J1  Qualifier J J M	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3 LOQ 0.36 0.36 0.49 0.36	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31 DL 0.095 0.12 0.072	Unit ug/Kg	Dil Fac    Dil Fac		Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA
Analyte Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)  Client Sample ID: KLA02-SE  Analyte Perfluorohexanesulfonic acid (PFHpA) Perfluoroheptanoic acid (PFHpA) Perfluoroheptanoic acid (PFDA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFDS)	Result 0.32 1.1  31-01  Result 0.16 0.46 0.25 2.6 7.6  31-02  Result 0.18 0.28 0.22 1.6 6.1	Qualifier J J1  Qualifier J J M	LOQ 0.38 1.3 LOQ 0.39 0.39 0.52 0.39 1.3 LOQ 0.36 0.36 0.49 0.36	DL 0.078 0.30 DL 0.10 0.13 0.077 0.081 0.31 DL 0.095 0.12 0.072 0.075 0.29	Unit ug/Kg	Dil Fac    Dil Fac   1		Method EPA 537 (Mod)	Prep Type Total/NA Total/NA  Prep Type Total/NA

This Detection Summary does not include radiochemical test results.

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA02-SB2-01 (Continued)

## Lab Sample ID: 320-39023-17

Analyte	Result (	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	2.2		0.37	0.12	ug/Kg	1	<del>\\</del>	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.38		0.37	0.10	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.1		0.50	0.074	ug/Kg	1	ф	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	21		0.37	0.077	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	270 I	E	1.2	0.30	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	21 .	JD	37	7.7	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	390 [	D	120	30	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA02-SB2-02

### Lab Sample ID: 320-39023-18

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	6.0		0.51	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	18		0.51	0.17	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.30	J	0.51	0.14	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	26		0.68	0.10	ug/Kg	1	¢	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	110	E	0.51	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	410	E	1.7	0.41	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	6.4	JD	10	2.6	ug/Kg	20	₩.	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	17	D	10	3.4	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	30	D	14	2.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	130	D	10	2.1	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	570	DM	34	8.1	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA02-SB3-01

### Lab Sample ID: 320-39023-19

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.47		0.36	0.094	ug/Kg		<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.45		0.36	0.12	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.40		0.36	0.098	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.50		0.48	0.071	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.4		0.36	0.075	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	110	EM	1.2	0.29	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	5.7	JD	7.2	1.5	ug/Kg	20	T	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	140	D	24	5.8	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA02-SB3-02

### Lab Sample ID: 320-39023-20

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.81		0.41	0.11	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.0		0.41	0.14	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.12	J M	0.41	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.8		0.55	0.081	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.4		0.41	0.086	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	21	M	1.4	0.33	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA03-SE	31-01					Lab San	nple ID: 320	-39023-2
- Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.082	J	0.52	0.076	ug/Kg	<u> </u>	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.99		0.39	0.080	ug/Kg	1 ፟	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.0		1.3	0.31	ug/Kg	1 <sup>‡</sup>	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA03-SE	31-02					Lab San	nple ID: 320	-39023-2
- Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.22	JM	0.40	0.13	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.53	0.078	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.40	0.082	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	17		1.3	0.32	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA03-SE	32-01					Lab San	nple ID: 320	-39023-2
 Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.15	J	0.37	0.12	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.10	J	0.49	0.072	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.37	0.076	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.4		1.2	0.29	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA03-SE	32-02					Lab San	nple ID: 320	-39023-2
- Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D		Prep Type
Perfluorooctanoic acid (PFOA)	0.15	J	0.38	0.13	ug/Kg	<u> </u>	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.51	0.075	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1		0.38	0.079	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.9	М	1.3	0.31	ug/Kg	1 <sup>‡</sup>	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA03-SE	33-01					Lab San	nple ID: 320	-39023-2
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.36	J	0.41	0.11	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.37	J	0.41	0.14	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.54		ug/Kg		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.7		0.41	0.084	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.2		1.4	0.32	ug/Kg	<b>1</b> 🌣	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA03-SE	33-02					Lab San	nple ID: 320	-39023-2
- Analyte	Result	Qualifier	LOQ		Unit	Dil Fac D		Prep Type
Perfluoroheptanoic acid (PFHpA)	0.59		0.41	0.11	ug/Kg	<u> </u>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3		0.41	0.14	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.75		0.54	0.080	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	12		0.41	0.084	ug/Kg	1 🌣	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14	M	1.4	0.33	ug/Kg	1 ☆	EPA 537 (Mod)	Total/NA

This Detection Summary does not include radiochemical test results.

Analyte

Perfluoroheptanoic acid (PFHpA)

**Prep Type** 

Total/NA

Dil Fac D Method

1 EPA 537 (Mod)

LOQ

0.42

DL Unit

0.11 ug/Kg

Result Qualifier

0.66

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA04-SB1-01 (Continued)

## Lab Sample ID: 320-39023-27

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	3.2		0.42	0.14	ug/Kg	1	<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.16	J M	0.42	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.45	J	0.56	0.082	ug/Kg	1	**	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	24		0.42	0.086	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	930	E	1.4	0.33	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	23	JD	42	8.6	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	2200	D	140	33	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA04-SB1-02

### Lab Sample ID: 320-39023-28

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	4.4		0.39	0.10	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	19		0.39	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.60	M	0.39	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	14		0.52	0.077	ug/Kg	1	÷	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	130	E	0.39	0.081	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1800	EM	1.3	0.31	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	4.0	JD	7.8	2.0	ug/Kg	20	÷	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	19	D	7.8	2.6	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	15	D	10	1.5	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	190	D	7.8	1.6	ug/Kg	20	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	2900	ED	26	6.3	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL2	17	J D	39	13	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL2	10	JD	52	7.7	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	160	D	39	8.1	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	3600	EDM	130	31	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA04-SB2-01

#### Lab Sample ID: 320-39023-29

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	14		0.38	0.10	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	27	E	0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.6	M	0.38	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	24	E	0.51	0.075	ug/Kg	1	÷	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	140	E	0.38	0.079	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2600	E	1.3	0.31	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	14	JD	38	10	ug/Kg	100	<b>*</b>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	26	JDM	38	13	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	14	JD	51	7.5	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	200	D	38	7.9	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	6600	E D	130	31	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA04-SB2-02

## Lab Sample ID: 320-39023-30

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	45	E	0.39	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	200	E	0.39	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.6		0.39	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	91	E	0.53	0.078	ug/Kg	1	₩.	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	510	E	0.39	0.082	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2100	E	1.3	0.32	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	44	D	39	10	ug/Kg	100	₩.	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	210	D	39	13	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	84	D	53	7.8	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	1100	D	39	8.2	ug/Kg	100	**************************************	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	4800	EDM	130	32	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

# Client Sample ID: KLA04-SB3-01

## Lab Sample ID: 320-39023-31

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	3.8		0.38	0.10	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	12		0.38	0.13	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	M	0.38	0.10	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	19		0.51	0.076	ug/Kg	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	51	E	0.38	0.079	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1600	E	1.3	0.31	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	3.7	JD	7.7	2.0	ug/Kg	20	T.	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	12	D	7.7	2.6	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	24	D	10	1.5	ug/Kg	20	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	53	D	7.7	1.6	ug/Kg	20	Ϋ́	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	3500	ED	26	6.1	ug/Kg	20	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL2	13	JD	38	13	ug/Kg	100	☼	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL2	16	JD	51	7.6	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	61	D	38	7.9	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	4500	ED	130	31	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA04-SB3-02

## Lab Sample ID: 320-39023-32

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	29		0.46	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	83	E	0.46	0.15	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.2		0.46	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	80	E	0.61	0.091	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	410	E	0.46	0.095	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1900	EM	1.5	0.37	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	27	D	9.2	2.4	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	85	D	9.2	3.1	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) -	110	D	12	1.8	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA04-SB3-02 (Continued)

## Lab Sample ID: 320-39023-32

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS) - DL	730	ED	9.2	1.9	ug/Kg	20	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	3500	EDM	31	7.4	ug/Kg	20	Ϋ́	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL2	33	JD	46	12	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL2	79	D	46	15	ug/Kg	100	Д	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL2	110	D	61	9.1	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	730	D	46	9.5	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	3800	EDM	150	37	ug/Kg	100	T	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA05-SB1-01

## Lab Sample ID: 320-39023-33

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.6		0.38	0.098	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	2.3		0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.61	M	0.38	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.9		0.50	0.074	ug/Kg	1	т. Д	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	74	E	0.38	0.078	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	130	E	1.3	0.30	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	6.2	JD	10	1.5	ug/Kg	20	Þ.	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	78	D	7.6	1.6	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	170	D	25	6.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA05-SB1-02

### Lab Sample ID: 320-39023-34

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.23	J	0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.077	J	0.50	0.074	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.6		0.38	0.078	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.5		1.3	0.30	ug/Kg	1		EPA 537 (Mod)	Total/NA

#### Client Sample ID: KLA05-SB2-01

#### Lab Sample ID: 320-39023-35

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.45		0.36	0.092	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6		0.36	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.36		0.36	0.096	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.32	J	0.47	0.070	ug/Kg	1	÷	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	20		0.36	0.073	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	37	E	1.2	0.28	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	1.8	JD	3.6	1.2	ug/Kg	10		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	20	D	3.6	0.73	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	40	D	12	2.8	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

### Client Sample ID: KLA05-SB2-02

## Lab Sample ID: 320-39023-36

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.38	J	0.40	0.10	ug/Kg		<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.2		0.40	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.34	J M	0.40	0.11	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.29	J	0.53	0.078	ug/Kg	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.9		0.40	0.082	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	40	E	1.3	0.32	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	1.3	JD	4.0	1.3	ug/Kg	10		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	9.7	D	4.0	0.82	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	42	D M	13	3.2	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA05-SB3-01

### Lab Sample ID: 320-39023-37

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	14		0.36	0.092	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	57	E	0.36	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	2.6	M	0.36	0.096	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.7		0.47	0.070	ug/Kg	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	430	E	0.36	0.073	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4600	E	1.2	0.28	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	13	JD	36	9.2	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	62	D	36	12	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	7.3	JD	47	7.0	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	650	D	36	7.3	ug/Kg	100	T	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	14000	ED	120	28	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA05-SB3-02

### Lab Sample ID: 320-39023-38

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.5		0.37	0.097	ug/Kg		<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		0.37	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	0.25	J M	0.37	0.10	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.58		0.50	0.074	ug/Kg	1	т. Д	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	15		0.37	0.077	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	560	E	1.2	0.30	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	13	JD	37	7.7	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	980	D	120	30	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA06-SB1-01

## Lab Sample ID: 320-39023-39

Analyte	Result Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.71	0.41	0.11	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	0.41	0.14	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	2.4	0.41	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.27 J	0.54	0.080	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11	0.41	0.084	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA06-SB1-01 (Continued)

### Lab Sample ID: 320-39023-39

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	190	ME	1.4	0.32	ug/Kg	1	\$	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	2.5	JD	8.1	2.2	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	11	D	8.1	1.7	ug/Kg	20	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	250	D	27	6.5	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

#### Client Sample ID: KLA06-SB1-02

#### Lab Sample ID: 320-39023-40

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.25	J	0.37	0.097	ug/Kg		₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.1		0.37	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.4		0.37	0.10	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.19	J	0.50	0.073	ug/Kg	1	\$	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	6.8		0.37	0.077	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	100	ME	1.2	0.30	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	6.6	JD	7.4	1.5	ug/Kg	20	Þ	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	120	D	25	6.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA06-SB2-01

## Lab Sample ID: 320-39023-41

Analyte	Result (	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.2	J1	0.48	0.12	ug/Kg		\$	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	6.7	J1	0.48	0.16	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.6		0.48	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.99		0.64	0.094	ug/Kg	1	т. Д	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	42 l	E J1	0.48	0.099	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	580 I	E J1	1.6	0.38	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	1.2	J D J1	4.8	1.2	ug/Kg	10	т. Д	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	6.7	D J1	4.8	1.6	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	1.6	J D	4.8	1.3	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	1.0	J D J1	6.4	0.94	ug/Kg	10	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	44 [	D J1	4.8	0.99	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	860 I	E D M J1	16	3.8	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	39 .	J D J1	48	9.9	ug/Kg	100	<b>*</b>	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	960 [	D M J1	160	38	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA06-SB2-02

#### Lab Sample ID: 320-39023-42

Analyte	Result Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.6	0.43	0.11	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	6.4	0.43	0.14	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.7	0.43	0.12	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1	0.57	0.084	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	40 E	0.43	0.089	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	920 E	1.4	0.34	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA06-SE	32-02 (C	ontinued)				Lab Sa	am	ple ID: 320	-39023-42
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA) - DL	1.8	J D	4.3	1.1	ug/Kg	10	₹	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	6.2	D	4.3	1.4	ug/Kg	10	Ď.	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	1.8	JD	4.3	1.2	ug/Kg	10	☆	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	2.1	JD	5.7	0.84	ug/Kg	10	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	45	D	4.3	0.89	ug/Kg	10	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	1300	ED	14	3.4	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	42	JD	43	8.9	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	1600	D	140	34	ug/Kg	100	☼	EPA 537 (Mod)	Total/NA
Client Sample ID: KLA07-SD	01-01					Lab Sa	am	ple ID: 320	-39023-4
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	1.5		1.1	0.26	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Client Sample ID: ER-01						Lab Sa	am	ple ID: 320	-39023-4
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.51	ng/L		_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	1.7		1.7	0.46	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.40	J M	1.7	0.39	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.9		1.7	0.32	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.7		3.4	0.93	ng/L	1		EPA 537 (Mod)	Total/NA
Client Sample ID: FB-01						Lab Sa	am	ple ID: 320	-39023-4
Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.61	J	1.7	0.32	ng/L		_	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.7	J	3.3	0.91	ng/L	1		EPA 537 (Mod)	Total/NA
Client Sample ID: ER-02						Lab Sa	am	ple ID: 320	-39023-4
Analyte		Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.52		1.7	0.47	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	1.7	0.33	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.4	M	3.5	0.96	ng/L	1		EPA 537 (Mod)	Total/NA
Client Sample ID: ER-03						Lab Sa	am	ple ID: 320	-39023-4
No Detections.									
Client Sample ID: ER-04						Lab Sa	am	ple ID: 320	-39023-4
Analyte		Qualifier	LOQ		Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.46	J	1.9	0.35	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.3	1	3.7	1.0	ng/L	1		EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

### Client Sample ID: MW-572-02-PRL05-01D

## Lab Sample ID: 320-39023-49

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	24		1.9	0.58	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	57		1.9	0.51	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	3.9		1.9	0.50	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	28		1.9	0.44	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	370	E	1.9	0.36	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1200	E	3.8	1.0	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	24	D	19	5.8	ng/L	10		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	62	D	19	5.1	ng/L	10		EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	28	D	19	4.4	ng/L	10		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	390	D	19	3.6	ng/L	10		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	1200	D	38	10	ng/L	10		EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA03-SB-2-01D

#### Lab Sample ID: 320-39023-51

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.16	J	0.38	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.098	J	0.51	0.076	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.38	0.080	ug/Kg	1	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.7		1.3	0.31	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

## Client Sample ID: KLA06-SB-2-02D

## Lab Sample ID: 320-39023-52

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.0		0.44	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		0.44	0.15	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	1.8		0.44	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4		0.59	0.087	ug/Kg	1	₩.	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	41	E	0.44	0.091	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	690	E	1.5	0.35	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	1.4	JD	4.4	1.2	ug/Kg	10		EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	4.4	D	4.4	1.5	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA) - DL	1.8	JD	4.4	1.2	ug/Kg	10	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	1.3	JD	5.9	0.87	ug/Kg	10	Þ	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	45	D	4.4	0.91	ug/Kg	10	☼	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	1000	ED	15	3.5	ug/Kg	10	☼	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL2	46	D	44	9.1	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL2	1100	D	150	35	ug/Kg	100	☼	EPA 537 (Mod)	Total/NA

#### Client Sample ID: KLA02-SB2-02D

#### Lab Sample ID: 320-39023-53

Analyte	Result Qualifier	LOQ	DL Unit	Dil Fac D Method Prep	Туре
Perfluoroheptanoic acid (PFHpA)	5.6	0.50	0.13 ug/Kg	1 EPA 537 (Mod) Tota	I/NA
Perfluorooctanoic acid (PFOA)	15	0.50	0.17 ug/Kg	1 🌣 EPA 537 (Mod) Tota	I/NA
Perfluorononanoic acid (PFNA)	0.34 J M	0.50	0.14 ug/Kg	1 🌣 EPA 537 (Mod) Tota	I/NA

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

#### Client Sample ID: KLA02-SB2-02D (Continued)

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	24		0.67	0.099	ug/Kg		☼	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	95	E	0.50	0.10	ug/Kg	1	∴	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	380	E	1.7	0.40	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluoroheptanoic acid (PFHpA) - DL	5.5	JD	10	2.6	ug/Kg	20	₩.	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	14	D	10	3.3	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS) - DL	23	D	13	2.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	110	D	10	2.1	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	490	D	33	8.0	ug/Kg	20	₩	EPA 537 (Mod)	Total/NA

#### Client Sample ID: KLA02-SB1-02D

#### Lab Sample ID: 320-39023-54

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.11	J	0.39	0.10	ug/Kg	1	<b>\</b>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.25	J M	0.39	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.52	0.077	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.7		0.39	0.081	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	12		1.3	0.31	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

### Client Sample ID: KLA05-SB1-01D

### Lab Sample ID: 320-39023-55

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.8		0.37	0.095	ug/Kg		<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	12		0.37	0.12	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorononanoic acid (PFNA)	2.8		0.37	0.099	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		0.49	0.072	ug/Kg	1	ф	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	170	E	0.37	0.076	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	390	E	1.2	0.29	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA) - DL	13	JD	37	12	ug/Kg	100	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS) - DL	300	D	37	7.6	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS) - DL	650	D	120	29	ug/Kg	100	₩	EPA 537 (Mod)	Total/NA

#### Client Sample ID: ER-05

Lah	Sample	ID:	320-39023-56
Lab	Sample	ID.	320-33023-30

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.74	JM	1.9	0.51	ng/L	1	_	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.52	J	1.9	0.44	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.4		1.9	0.36	ng/L	1		EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		3.8	1.0	ng/L	1		EPA 537 (Mod)	Total/NA

#### Client Sample ID: IDW-KINGSLEY-SO-LDOS01

Lab Sample ID: 320-39023-57

No Detections.

## Client Sample ID: IDW-KINGSLEY-WA-LDOS01

Lab Sample ID: 320-39023-58

No Detections.

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

## Client Sample ID: KLA07-SD1-01D

## Lab Sample ID: 320-39023-59

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	0.12	J	0.40	0.10	ug/Kg	1	<del>\</del>	EPA 537 (Mod)	Total/NA
Perfluorooctanoic acid (PFOA)	0.48		0.40	0.13	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.20	J	0.54	0.079	ug/Kg	1	₽	EPA 537 (Mod)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.1		0.40	0.083	ug/Kg	1	<b>\</b>	EPA 537 (Mod)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15	J1	1.3	0.32	ug/Kg	1	₩	EPA 537 (Mod)	Total/NA

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA01-01-01 Lab Sample ID: 320-39023-1

Date Collected: 05/06/18 14:50 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7.6		1.9	0.59	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorooctanoic acid (PFOA)	20		1.9	0.52	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorononanoic acid (PFNA)	0.56	J M	1.9	0.50	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorobutanesulfonic acid (PFBS)	39	M	1.9	0.44	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorohexanesulfonic acid (PFHxS)	220		1.9	0.37	ng/L		05/18/18 10:26	05/28/18 11:18	1
Perfluorooctanesulfonic acid (PFOS)	510	E	3.9	1.1	ng/L		05/18/18 10:26	05/28/18 11:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75	-	50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C4-PFHpA	79		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C4 PFOA	87		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C5 PFNA	81		50 - 150				05/18/18 10:26	05/28/18 11:18	1
1802 PFHxS	80		50 <sub>-</sub> 150				05/18/18 10:26	05/28/18 11:18	1
1002111M0									
13C4 PFOS	74		50 - 150				05/18/18 10:26	05/28/18 11:18	1
13C4 PFOS Method: EPA 537 (Mod) - PFA	74 AS for QSM !	5.1, Table	B-15 - DL	DI	Unit	n			
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	74 AS for QSM (	5.1, Table   Qualifier	B-15 - DL LOQ		Unit na/l	<u>D</u>	Prepared	Analyzed	Dil Fac
13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)	AS for QSM Result 7.5	5.1, Table   Qualifier J D	B-15 - DL LOQ 9.7	2.9	ng/L	<u>D</u>	Prepared 05/18/18 10:26	Analyzed 05/29/18 18:41	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	74 AS for QSM 9 Result 7.5 22	5.1, Table   Qualifier J D D	B-15 - DL LOQ 9.7 9.7	2.9 2.6	ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 18:41 05/29/18 18:41	Dil Fac 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	74 S for QSM ( Result 7.5 22 7.2	5.1, Table   Qualifier J D	B-15 - DL LOQ 9.7	2.9 2.6 2.5	ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 18:41	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHPA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	74 S for QSM ( Result 7.5 22 7.2	5.1, Table   Qualifier   J D   D   U M   D M	B-15 - DL LOQ 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	<b>Dil Fac</b> 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	74 S for QSM ( Result 7.5 22 7.2 40	5.1, Table   Qualifier   J D D U M D M	B-15 - DL LOQ 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	<b>Dil Fac</b> 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	74 AS for QSM ( Result 7.5 22 7.2 40 230	D M	B-15 - DL LOQ 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41	Dil Fac 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	74 AS for QSM ( Result 7.5 22 7.2 40 230 500	D M	B-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41 05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	74 AS for QSM 9 Result 7.5 22 7.2 40 230 500 %Recovery	D M	B-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7 19	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26	Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  Analyzed	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	74 Result 7.5 22 7.2 40 230 500  **Recovery* 72	D U M D M D Qualifier	B-15 - DL LOQ 9.7 9.7 9.7 9.7 9.7 19 Limits 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  Analyzed  05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS)	74 Result 7.5 22 7.2 40 230 500  %Recovery 72 77	D Qualifier  D U M  D M  D  Qualifier	B-15 - DL LOQ 9.7 9.7 9.7 9.7 19 Limits 50 - 150 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  Analyzed  05/29/18 18:41  05/29/18 18:41	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	74 AS for QSM 9 Result 7.5 22 7.2 40 230 500  %Recovery 72 77 83	D Qualifier J D D U M D M D Qualifier	9.7 9.7 9.7 9.7 9.7 9.7 19 Limits 50 - 150 50 - 150 50 - 150	2.9 2.6 2.5 2.2	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  Analyzed  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41  05/29/18 18:41	Dil Fac 5 5 5 5 5 5 6 7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

Client Sample ID: MW-KLA02-01-01 Lab Sample ID: 320-39023-2

Date Collected: 05/06/18 12:05 Matrix: Water Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7300	E	1.8	0.55	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorooctanoic acid (PFOA)	13000	EM	1.8	0.49	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorononanoic acid (PFNA)	340	M	1.8	0.47	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorobutanesulfonic acid (PFBS)	1500	EM	1.8	0.42	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorohexanesulfonic acid (PFHxS)	14000	EM	1.8	0.34	ng/L		05/18/18 10:26	05/28/18 11:26	1
Perfluorooctanesulfonic acid (PFOS)	88000	EM	3.6	1.0	ng/L		05/18/18 10:26	05/28/18 11:26	1

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA02-01-01 Lab Sample ID: 320-39023-2

Date Collected: 05/06/18 12:05 Date Received: 05/09/18 09:20

**Matrix: Water** 

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	321	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	
13C4-PFHpA	44	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	
13C4 PFOA	65		50 - 150				05/18/18 10:26	05/28/18 11:26	1
13C5 PFNA	40	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	
1802 PFHxS	77		50 - 150				05/18/18 10:26	05/28/18 11:26	
13C4 PFOS	28	Q	50 - 150				05/18/18 10:26	05/28/18 11:26	•
Method: EPA 537 (Mod) - PFA	S for QSM 5	5.1, Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7700	D	180	55	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorooctanoic acid (PFOA)	21000	D	180	49	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorononanoic acid (PFNA)	340	D M	180	47	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorobutanesulfonic acid (PFBS)	9700	D	180	42	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorohexanesulfonic acid (PFHxS)	66000	E D	180	34	ng/L		05/18/18 10:26	05/29/18 18:49	100
Perfluorooctanesulfonic acid (PFOS)	380000	ED	360	100	ng/L		05/18/18 10:26	05/29/18 18:49	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	176	Q	50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C4-PFHpA	54		50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C4 PFOA	68		50 - 150				05/18/18 10:26	05/29/18 18:49	100
13C5 PFNA	53		50 - 150				05/18/18 10:26	05/29/18 18:49	100
1802 PFHxS	96		50 - 150				05/18/18 10:26	05/29/18 18:49	100
100211110									

Client Sample ID: MW-KLA03-01-01 Lab Sample ID: 320-39023-3

Date Collected: 05/06/18 15:55

Perfluoroheptanoic acid (PFHpA)

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL

Result Qualifier

190 D

Date Received: 05/08/18 09:00									
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table I Qualifier	B-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	200		2.0	0.61	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorooctanoic acid (PFOA)	290		2.0	0.54	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorononanoic acid (PFNA)	16	M	2.0	0.52	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorobutanesulfonic acid (PFBS)	180		2.0	0.46	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorohexanesulfonic acid (PFHxS)	1800	E	2.0	0.38	ng/L		05/18/18 10:26	05/28/18 11:34	1
Perfluorooctanesulfonic acid (PFOS)	5200	E	4.0	1.1	ng/L		05/18/18 10:26	05/28/18 11:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/18/18 10:26	05/28/18 11:34	
13C4-PFHpA	69		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C4 PFOA	85		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C5 PFNA	62		50 - 150				05/18/18 10:26	05/28/18 11:34	1
1802 PFHxS	66		50 - 150				05/18/18 10:26	05/28/18 11:34	1
13C4 PFOS	54		50 - 150				05/18/18 10:26	05/28/18 11:34	1

TestAmerica Sacramento

Analyzed

05/18/18 10:26 05/29/18 19:04

Prepared

**Matrix: Water** 

100

DL Unit

30 ng/L

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA03-01-01 Lab Sample ID: 320-39023-3

Date Collected: 05/06/18 15:55 **Matrix: Water** Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	300	D	100	27	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorononanoic acid (PFNA)	75	U	100	26	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorobutanesulfonic acid (PFBS)	170	D	100	23	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorohexanesulfonic acid (PFHxS)	2700	D	100	19	ng/L		05/18/18 10:26	05/29/18 19:04	50
Perfluorooctanesulfonic acid (PFOS)	6100	D M	200	55	ng/L		05/18/18 10:26	05/29/18 19:04	50
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68	М	50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4-PFHpA	72		50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4 PFOA	83		50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C5 PFNA	77		50 - 150				05/18/18 10:26	05/29/18 19:04	50
1802 PFHxS	72		50 - 150				05/18/18 10:26	05/29/18 19:04	50
13C4 PFOS	75		50 - 150				05/18/18 10:26	05/29/18 19:04	50

Client Sample ID: MW-KLA04-01-01 Lab Sample ID: 320-39023-4 **Matrix: Water** 

Date Collected: 05/06/18 14:15

(PFOS)

Date Received: 05/08/18 09:00									
Method: EPA 537 (Mod) - PFAS	S for QSM 5	5.1, Table E	3-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	27		2.0	0.60	ng/L		05/18/18 10:26	05/29/18 19:20	1

Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	100		4.0	1.1	ng/L	05/18/18 10:26	05/29/18 19:20	1
(PFHxS)			4.0			05/40/40 40 00	05/00/40 40 00	
(PFBS) Perfluorohexanesulfonic acid	610	E	2.0	0.38	ng/L	05/18/18 10:26	05/29/18 19:20	1
Perfluorobutanesulfonic acid	96		2.0	0.45	ng/L	05/18/18 10:26	05/29/18 19:20	1
Perfluorononanoic acid (PFNA)	1.5	U M	2.0	0.51	ng/L	05/18/18 10:26	05/29/18 19:20	1
Perfluorooctanoic acid (PFOA)	41		2.0	0.53	ng/L	05/18/18 10:26	05/29/18 19:20	1
Perfluoroheptanoic acid (PFHpA)	27		2.0	0.60	ng/L	05/18/18 10:26	05/29/18 19:20	1

Isotope Dilution	%Recovery	Qualifier Limi	ts Pre	pared	Analyzed	Dil Fac
13C3-PFBS	71	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1
13C4-PFHpA	74	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1
13C4 PFOA	80	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1
13C5 PFNA	79	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1
18O2 PFHxS	69	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1
13C4 PFOS	69	50 - 1	50 05/18/	18 10:26	05/29/18 19:20	1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	31	D	9.9	3.0	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorooctanoic acid (PFOA)	43	D	9.9	2.7	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorononanoic acid (PFNA)	7.4	UM	9.9	2.6	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorobutanesulfonic acid (PFBS)	95	D	9.9	2.3	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorohexanesulfonic acid (PFHxS)	690	D	9.9	1.9	ng/L		05/18/18 10:26	05/29/18 19:12	5
Perfluorooctanesulfonic acid	100	D	20	5.4	ng/L		05/18/18 10:26	05/29/18 19:12	5

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-KLA04-01-01 Lab Sample ID: 320-39023-4

Date Collected: 05/06/18 14:15

Matrix: Water

Date Received: 05/08/18 09:00

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	63		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4-PFHpA	65		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4 PFOA	75		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C5 PFNA	67		50 - 150	05/18/18 10:26	05/29/18 19:12	5
18O2 PFHxS	62		50 - 150	05/18/18 10:26	05/29/18 19:12	5
13C4 PFOS	62		50 - 150	05/18/18 10:26	05/29/18 19:12	5

Client Sample ID: MW-573-03-PRL05-01 Lab Sample ID: 320-39023-5

Date Collected: 05/06/18 09:15 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4400	E J1	2.0	0.60	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorooctanoic acid (PFOA)	4700	E J1	2.0	0.54	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorononanoic acid (PFNA)	200	J1	2.0	0.52	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorobutanesulfonic acid (PFBS)	1900	E J1 M	2.0	0.46	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorohexanesulfonic acid (PFHxS)	12000	E J1	2.0	0.38	ng/L		05/18/18 10:26	05/28/18 11:50	1
Perfluorooctanesulfonic acid (PFOS)	32000	J1 E M	4.0	1.1	ng/L		05/18/18 10:26	05/28/18 11:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	136		50 - 150				05/18/18 10:26	05/28/18 11:50	1
13C4-PFHpA	46	Q	50 <sub>-</sub> 150				05/18/18 10:26	05/28/18 11:50	1
13C4 PFOA	77		50 <sub>-</sub> 150				05/18/18 10:26	05/28/18 11:50	1
13C5 PFNA	58		50 - 150				05/18/18 10:26	05/28/18 11:50	1
18O2 PFHxS	54		50 <sub>-</sub> 150				05/18/18 10:26	05/28/18 11:50	1
13C4 PFOS	48	·	50 - 150				05/18/18 10:26	05/28/18 11:50	1
Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	5.1, Table   Qualifier	B-15 - DL LOQ		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	5.1, Table Qualifier	B-15 - DL LOQ 200	60	ng/L	<u>D</u>	Prepared 05/18/18 10:26	Analyzed 05/29/18 19:28	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 5100 6700	5.1, Table Qualifier  J1 D  J1 D	B-15 - DL LOQ 200	60 54	ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 19:28 05/29/18 19:28	100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	S for QSM 8  Result  5100 6700 190	5.1, Table Qualifier J1 D J1 D J J1 D M	B-15 - DL LOQ 200 200 200	60 54 52	ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM 8  Result  5100 6700 190	5.1, Table Qualifier  J1 D  J1 D	B-15 - DL LOQ 200	60 54 52 46	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 19:28 05/29/18 19:28	100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM 9 Result 5100 6700 190 3900	5.1, Table Qualifier J1 D J1 D J J1 D M	B-15 - DL LOQ 200 200 200	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	Result 5100 6700 190 3900	5.1, Table Qualifier J1 D J1 D J1 D J J1 D M J1 D	B-15 - DL LOQ 200 200 200 200	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28	Dil Fac 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	Result 5100 6700 190 3900	5.1, Table Qualifier J1 D J1 D J J1 D M J1 D E J1 D	B-15 - DL LOQ 200 200 200 200 200	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28	Dil Fac 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFOA)  Perfluorobutanesulfonic acid (PFBS)  Perfluorohexanesulfonic acid (PFHxS)  Perfluorooctanesulfonic acid (PFHxS)	Result 5100 6700 190 3900 63000 %Recovery	5.1, Table Qualifier J1 D J1 D J J1 D M J1 D E J1 D	B-15 - DL LOQ 200 200 200 200 200 400	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	Analyzed 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	100 100 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	Result 5100 6700 190 3900 63000 %Recovery	Gualifier J1 D Qualifier	B-15 - DL LOQ 200 200 200 200 200 400 Limits	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u> _	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26	Analyzed  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  Analyzed	100 100 100 100 100 100 100 100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	S for QSM 4 Result 5100 6700 190 3900 39000 63000  **Recovery 99	5.1, Table Qualifier J1 D J1 D J J1 D M J1 D E J1 D J1 E D Qualifier M	B-15 - DL LOQ 200 200 200 200 200 400 Limits 50 - 150	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u> _	Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26  Prepared 05/18/18 10:26 05/18/18 10:26	Analyzed  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  05/29/18 19:28  4nalyzed  05/29/18 19:28	Dil Fac  100  100  100  100  100  100  100  Dil Fac  100  100
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	Result 5100 6700 190 3900 39000 63000  **Recovery 99 64	5.1, Table Qualifier J1 D J1 D J1 D M J1 D E J1 D J1 E D Qualifier M	B-15 - DL LOQ 200 200 200 200 200 400 Limits 50 - 150 50 - 150	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u> _	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28  Analyzed  05/29/18 19:28 05/29/18 19:28	Dil Face 1000 1000 1000 1000 1000 1000 1000 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result 5100 6700 190 3900 39000 63000  **Recovery 99 64 73	Qualifier J1 D J1 D J1 D M J1 D E J1 D J1 E D Qualifier M	B-15 - DL LOQ 200 200 200 200 200 400 Limits 50 - 150 50 - 150	60 54 52 46 38	ng/L ng/L ng/L ng/L	<u>D</u>	Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  Prepared  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26  05/18/18 10:26	Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28  Analyzed  05/29/18 19:28 05/29/18 19:28 05/29/18 19:28 05/29/18 19:28	Dil Fac  100 100 100 100 100 100 100 100 100 1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-572-02-PRL05-01 Lab Sample ID: 320-39023-6

Date Collected: 05/06/18 10:30 **Matrix: Water** 

Date Received: 05/08/18 09:00

Analyte		5.1, Table   Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	25		1.9	0.57	ng/L		05/18/18 10:26	05/28/18 12:13	-
Perfluorooctanoic acid (PFOA)	56		1.9	0.51	ng/L		05/18/18 10:26	05/28/18 12:13	
Perfluorononanoic acid (PFNA)	3.8		1.9	0.49	ng/L		05/18/18 10:26	05/28/18 12:13	
Perfluorobutanesulfonic acid (PFBS)	27		1.9	0.43	ng/L		05/18/18 10:26	05/28/18 12:13	
Perfluorohexanesulfonic acid (PFHxS)	360	E	1.9	0.36	ng/L		05/18/18 10:26	05/28/18 12:13	•
Perfluorooctanesulfonic acid (PFOS)	1100	EM	3.8	1.0	ng/L		05/18/18 10:26	05/28/18 12:13	,
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	85		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C4-PFHpA	83		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C4 PFOA	89		50 - 150				05/18/18 10:26	05/28/18 12:13	1
13C5 PFNA	82		50 - 150				05/18/18 10:26	05/28/18 12:13	
1802 PFHxS	81		50 - 150				05/18/18 10:26	05/28/18 12:13	
13C4 PFOS	74		50 - 150				05/18/18 10:26	05/28/18 12:13	1
		5.1. Table							
Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	Qualifier	B-15 - DL LOQ		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	Qualifier D	B-15 - DL LOQ 19	5.7	ng/L	<u>D</u>	05/18/18 10:26	05/29/18 20:07	10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 23 55	Qualifier D	B-15 - DL LOQ 19	5.7 5.1	ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07	10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM !  Result  23  55  14	Qualifier D D U M	B-15 - DL LOQ 19 19	5.7 5.1 4.9	ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 23 55	Qualifier D D U M	B-15 - DL LOQ 19	5.7 5.1 4.9 4.3	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM !  Result  23  55  14	Qualifier D U U M	B-15 - DL LOQ 19 19	5.7 5.1 4.9 4.3	ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM (  Result  23  55  14  27	Qualifier D D U M D	B-15 - DL LOQ 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM 9  Result  23  55  14  27  360	Qualifier D D U M D D	B-15 - DL LOQ 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 8 Result 23 55 14 27 360 1100	Qualifier D D U M D D Qualifier	B-15 - DL LOQ 19 19 19 19 19	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 <i>Prepared</i>	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 9  Result  23  55  14  27  360  1100  %Recovery	Qualifier D D U M D D Qualifier	B-15 - DL LOQ 19 19 19 19 19 38	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 Prepared 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 Analyzed	10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	S for QSM 4 Result 23 55 14 27 360 1100 %Recovery 69	Qualifier D D U M D D Qualifier	B-15 - DL LOQ 19 19 19 19 38 Limits 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 Prepared 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 Analyzed 05/29/18 20:07	10 10 10 10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM 4 Result 23 55 14 27 360 1100 %Recovery 69 79	Qualifier D D U M D D Qualifier	B-15 - DL LOQ 19 19 19 19 38 Limits 50 - 150 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 Analyzed 05/29/18 20:07 05/29/18 20:07	10 10 10 10 10 10 10 10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM 4 Result 23 55 14 27 360 1100 %Recovery 69 79 92	Qualifier D D U M D D Qualifier	B-15 - DL LOQ 19 19 19 19 38 Limits 50 - 150 50 - 150	5.7 5.1 4.9 4.3 3.6	ng/L ng/L ng/L ng/L	<u>D</u>	05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 Prepared 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26 05/18/18 10:26	05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07 Analyzed 05/29/18 20:07 05/29/18 20:07 05/29/18 20:07	10 10 10 10 10 10

Client Sample ID: MW-KLA06-01-01

Lab Sample ID: 320-39023-7 Date Collected: 05/06/18 13:15 **Matrix: Water** 

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6100	E	1.9	0.59	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorooctanoic acid (PFOA)	11000	EM	1.9	0.52	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorononanoic acid (PFNA)	500	EM	1.9	0.50	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorobutanesulfonic acid (PFBS)	1600	E	1.9	0.45	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorohexanesulfonic acid (PFHxS)	17000	EM	1.9	0.37	ng/L		05/18/18 10:26	05/28/18 12:29	1
Perfluorooctanesulfonic acid (PFOS)	57000	E	3.9	1.1	ng/L		05/18/18 10:26	05/28/18 12:29	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: MW-KLA06-01-01 Lab Sample ID: 320-39023-7

Date Collected: 05/06/18 13:15 Date Received: 05/08/18 09:00

**Matrix: Water** 

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	233	Q	50 - 150				05/18/18 10:26	05/28/18 12:29	1
13C4-PFHpA	37	Q	50 - 150				05/18/18 10:26	05/28/18 12:29	1
13C4 PFOA	52		50 - 150				05/18/18 10:26	05/28/18 12:29	1
13C5 PFNA	50		50 - 150				05/18/18 10:26	05/28/18 12:29	1
1802 PFHxS	54		50 - 150				05/18/18 10:26	05/28/18 12:29	1
13C4 PFOS	36	Q	50 - 150				05/18/18 10:26	05/28/18 12:29	1
Method: EPA 537 (Mod) - PFA	S for QSM 5	5.1, Table	B-15 - DL2						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5400	D	190	59	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorooctanoic acid (PFOA)	14000	D	190	52	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorononanoic acid (PFNA)	490	D	190	50	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorobutanesulfonic acid (PFBS)	7900	D	190	45	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorohexanesulfonic acid (PFHxS)	68000	ED	190	37	ng/L		05/18/18 10:26	05/29/18 20:31	100
Perfluorooctanesulfonic acid (PFOS)	130000	ED	390	110	ng/L		05/18/18 10:26	05/29/18 20:31	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	145	М	50 - 150				05/18/18 10:26	05/29/18 20:31	100
13C4-PFHpA	53		50 - 150				05/18/18 10:26	05/29/18 20:31	100
13C4 PFOA	58		50 - 150				05/18/18 10:26	05/29/18 20:31	100
13C5 PFNA	51		50 - 150				05/18/18 10:26	05/29/18 20:31	100
1802 PFHxS	76		50 - 150				05/18/18 10:26	05/29/18 20:31	100
13C4 PFOS	46	Q	50 <sub>-</sub> 150				05/18/18 10:26	05/29/18 20:31	100

Client Sample ID: KLA08-SW1-01 Lab Sample ID: 320-39023-8

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Date Collected: 05/07/18 08:30 **Matrix: Water** Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	J M	1.9	0.58	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorooctanoic acid (PFOA)	1.8	J M	1.9	0.52	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorononanoic acid (PFNA)	0.95	J M	1.9	0.50	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorobutanesulfonic acid (PFBS)	0.96	UM	1.9	0.44	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorohexanesulfonic acid (PFHxS)	3.7	M	1.9	0.36	ng/L		05/21/18 12:01	05/31/18 04:51	1
Perfluorooctanesulfonic acid (PFOS)	28	M	3.8	1.1	ng/L		05/21/18 12:01	05/31/18 04:51	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	76		50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C4-PFHpA	76		50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C4 PFOA	95		50 - 150				05/21/18 12:01	05/31/18 04:51	1
13C5 PFNA	103		50 - 150				05/21/18 12:01	05/31/18 04:51	1
1802 PFHxS	93		50 - 150				05/21/18 12:01	05/31/18 04:51	1

05/21/18 12:01 05/31/18 04:51

50 - 150

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA-01-SB1-01

Lab Sample ID: 320-39023-9 Date Collected: 05/02/18 14:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.0

Analyte	Result	Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.38		0.38	0.098	ug/Kg	☼	05/14/18 13:10	05/29/18 03:32	1
Perfluorooctanoic acid (PFOA)	3.9		0.38	0.13	ug/Kg	₽	05/14/18 13:10	05/29/18 03:32	1
Perfluorononanoic acid (PFNA)	0.25	UM	0.38	0.10	ug/Kg	₽	05/14/18 13:10	05/29/18 03:32	1
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.50	0.074	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 03:32	1
Perfluorohexanesulfonic acid (PFHxS)	18		0.38	0.078	ug/Kg	☼	05/14/18 13:10	05/29/18 03:32	1
Perfluorooctanesulfonic acid (PFOS)	240	E	1.3	0.30	ug/Kg	₽	05/14/18 13:10	05/29/18 03:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	74		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C4-PFHpA	82		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C4 PFOA	86		50 - 150				05/14/18 13:10	05/29/18 03:32	1
13C5 PFNA	60		50 - 150				05/14/18 13:10	05/29/18 03:32	1
1802 PFHxS	78		50 - 150				05/14/18 13:10	05/29/18 03:32	1
18O2 PFHxS 13C4 PFOS	78 48	Q	50 - 150 50 - 150					05/29/18 03:32 05/29/18 03:32	1
13C4 PFOS Method: EPA 537 (Mod) - PFA	48 S for QSM !	5.1, Table	50 - 150 <b>B-15 - DL</b>	DL	Unit	D	05/14/18 13:10	05/29/18 03:32	1
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	48 S for QSM !	5.1, Table   Qualifier	50 - 150		Unit ua/Ka	D	05/14/18 13:10 Prepared		-
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM Result	5.1, Table   Qualifier	50 - 150  B-15 - DL  LOQ  7.5	2.0	ug/Kg	_	05/14/18 13:10  Prepared  05/14/18 13:10	05/29/18 03:32 Analyzed	Dil Fac 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM Result	5.1, Table   Qualifier U J D M	50 - 150  B-15 - DL  LOQ  7.5  7.5	2.0 2.5	ug/Kg ug/Kg	<del>\</del>	05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07	Dil Fac 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluoronoctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	48 S for QSM ( Result 5.0 3.9	5.1, Table   Qualifier U	50 - 150  B-15 - DL  LOQ  7.5	2.0 2.5 2.0	ug/Kg ug/Kg ug/Kg	<u> </u>	05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07 05/29/18 11:07	Dil Fac 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	48 S for QSM (  Result  5.0  3.9  5.0	5.1, Table   Qualifier U J D M U	50 - 150  B-15 - DL  LOQ  7.5  7.5  7.5	2.0 2.5 2.0 1.5	ug/Kg ug/Kg		Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS)	48 S for QSM (  Result  5.0  3.9  5.0  4.5	5.1, Table   Qualifier   U   U   U   D	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg	# # #	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	48 S for QSM (  Result  5.0  3.9  5.0  4.5  17	5.1, Table   Qualifier U U U D D	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	48 S for QSM (  Result  5.0  3.9  5.0  4.5  17	5.1, Table   Qualifier   U   U   D   D   Qualifier   D   Qualifier   D   D   D   C   C   C   C   C   C   C	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07  Analyzed	Dil Fac 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	\$\frac{18}{8}\$ S for QSM \$\frac{1}{8}\$ Result \$\frac{5.0}{5.0}\$ \$\frac{4.5}{4.5}\$ \$\frac{17}{430}\$ \$\partial Recovery	5.1, Table   Qualifier   U   U   D   D   Qualifier   D   Qualifier   D   D   D   C   C   C   C   C   C   C	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  Analyzed	Dil Fac 20 20 20 20 20 20 Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	48 S for QSM 8 Result 5.0 3.9 5.0 4.5 17 430  **Recovery* 79	5.1, Table   Qualifier   U   U   D   D   Qualifier   D   Qualifier   D   D   D   C   C   C   C   C   C   C	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 7.5 25  Limits 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07  Analyzed  05/29/18 11:07	Dil Fac 20 20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	48 S for QSM (  Result  5.0 3.9 5.0 4.5 17 430  **Recovery  79 89	5.1, Table   Qualifier   U   U   D   D   Qualifier   D   Qualifier   D   D   D   C   C   C   C   C   C   C	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits 50 - 150 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  05/29/18 11:07  Analyzed  05/29/18 11:07  05/29/18 11:07	Dil Fac 20 20 20 20 20 20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	48 S for QSM (  Result  5.0  3.9  5.0  4.5  17  430  **Recovery  79  89  90	5.1, Table   Qualifier   U   U   D   D   Qualifier   D   Qualifier   D   D   D   C   C   C   C   C   C   C	50 - 150  B-15 - DL LOQ 7.5 7.5 7.5 10 7.5 25  Limits 50 - 150 50 - 150 50 - 150	2.0 2.5 2.0 1.5 1.6	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	# # # # #	Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10  Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	Analyzed  05/29/18 03:32  Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07 05/29/18 11:07  05/29/18 11:07  Analyzed  05/29/18 11:07 05/29/18 11:07 05/29/18 11:07	Dil Fac 20 20 20 20 20 20 20 20 20 20 20 20 20

Client Sample ID: KLA-01-SB1-02

Date Collected: 05/02/18 14:10 **Matrix: Solid** Percent Solids: 77.4 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.32	J	0.38	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 03:40	1
Perfluorooctanoic acid (PFOA)	1.0		0.38	0.13	ug/Kg	≎	05/14/18 13:10	05/29/18 03:40	1
Perfluorononanoic acid (PFNA)	0.26	U M	0.38	0.10	ug/Kg	₽	05/14/18 13:10	05/29/18 03:40	1
Perfluorobutanesulfonic acid (PFBS)	0.31	J	0.51	0.075	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 03:40	1
Perfluorohexanesulfonic acid (PFHxS)	9.1		0.38	0.079	ug/Kg	₽	05/14/18 13:10	05/29/18 03:40	1
Perfluorooctanesulfonic acid (PFOS)	150	E	1.3	0.31	ug/Kg	₽	05/14/18 13:10	05/29/18 03:40	1

Lab Sample ID: 320-39023-10

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple	ID: K	<b>LA-01</b>	-SB1-02
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**Matrix: Solid** Date Collected: 05/02/18 14:10 Date Received: 05/09/18 09:20 Percent Solids: 77.4

Isotope Dilution	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
13C3-PFBS	69	50 - 150	05/14/18 13:10 05/29/18 03:4	7
13C4-PFHpA	83	50 - 150	05/14/18 13:10 05/29/18 03:4	) 1
13C4 PFOA	82	50 - 150	05/14/18 13:10 05/29/18 03:4	) 1
13C5 PFNA	67	50 - 150	05/14/18 13:10 05/29/18 03:4	1
1802 PFHxS	75	50 - 150	05/14/18 13:10 05/29/18 03:4	) 1
13C4 PFOS	54	50 <sub>-</sub> 150	05/14/18 13:10 05/29/18 03:4	) 1
Method: FPA 537 (Mod	d) - $PFAS$ for $QSM 5.1$ Table	B-15 - DI		

Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.1	U	7.7	2.0	ug/Kg	☆	05/14/18 13:10	05/29/18 11:15	20
Perfluorooctanoic acid (PFOA)	5.1	UM	7.7	2.6	ug/Kg	☼	05/14/18 13:10	05/29/18 11:15	20
Perfluorononanoic acid (PFNA)	5.1	U	7.7	2.1	ug/Kg	☼	05/14/18 13:10	05/29/18 11:15	20
Perfluorobutanesulfonic acid (PFBS)	4.6	UM	10	1.5	ug/Kg	₽	05/14/18 13:10	05/29/18 11:15	20
Perfluorohexanesulfonic acid (PFHxS)	9.1	D	7.7	1.6	ug/Kg	☼	05/14/18 13:10	05/29/18 11:15	20
Perfluorooctanesulfonic acid (PFOS)	210	D	26	6.1	ug/Kg	₩	05/14/18 13:10	05/29/18 11:15	20
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

	, or to correctly distances			, <b>,</b>	
13C3-PFBS	71 M	50 - 150	05/14/18 13:10	05/29/18 11:15	20
13C4-PFHpA	78	50 - 150	05/14/18 13:10	05/29/18 11:15	20
13C4 PFOA	89	50 - 150	05/14/18 13:10	05/29/18 11:15	20
13C5 PFNA	79	50 - 150	05/14/18 13:10	05/29/18 11:15	20
1802 PFHxS	70	50 - 150	05/14/18 13:10	05/29/18 11:15	20
13C4 PFOS	63	50 - 150	05/14/18 13:10	05/29/18 11:15	20

Client Sample ID: KLA-01-SB2-01

Lab Sample ID: 320-39023-11 Date Collected: 05/02/18 13:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 87.9

pate Neceived. 05/05/10 05.20	<u>'</u>							ercent Jone	13. 07.3
Method: EPA 537 (Mod) - PF		5.1, Table Qualifier	B-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.22	U	0.34	0.088	ug/Kg	<u> </u>	05/14/18 13:10		1
Perfluorooctanoic acid (PFOA)	0.30	J	0.34	0.11	ug/Kg	₩	05/14/18 13:10	05/29/18 03:48	1
Perfluorononanoic acid (PFNA)	0.22	U	0.34	0.091	ug/Kg	₩	05/14/18 13:10	05/29/18 03:48	1
Perfluorobutanesulfonic acid (PFBS)	0.072	J	0.45	0.066	ug/Kg	₽	05/14/18 13:10	05/29/18 03:48	1
Perfluorohexanesulfonic acid (PFHxS)	1.5		0.34	0.070	ug/Kg	☼	05/14/18 13:10	05/29/18 03:48	1
Perfluorooctanesulfonic acid (PFOS)	1.7		1.1	0.27	ug/Kg	₩	05/14/18 13:10	05/29/18 03:48	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	05/29/18 03:48	1
13C4-PFHpA	84		50 - 150				05/14/18 13:10	05/29/18 03:48	1
13C4 PFOA	88		50 - 150				05/14/18 13:10	05/29/18 03:48	1
13C5 PFNA	92		50 - 150				05/14/18 13:10	05/29/18 03:48	1
1802 PFHxS	71		50 - 150				05/14/18 13:10	05/29/18 03:48	1
13C4 PFOS	72		50 - 150				05/14/18 13:10	05/29/18 03:48	1

Lab Sample ID: 320-39023-10

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

1802 PFHxS

13C4 PFOS

Client Sample ID: KLA-01-SB2-02 Lab Sample ID: 320-39023-12

 Date Collected: 05/02/18 13:20
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.14	J	0.39	0.10	ug/Kg	₽	05/14/18 13:10	05/29/18 03:56	1
Perfluorooctanoic acid (PFOA)	0.39		0.39	0.13	ug/Kg	☼	05/14/18 13:10	05/29/18 03:56	1
Perfluorononanoic acid (PFNA)	0.26	UM	0.39	0.11	ug/Kg	☼	05/14/18 13:10	05/29/18 03:56	1
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.52	0.077	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 03:56	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.39	0.081	ug/Kg	₽	05/14/18 13:10	05/29/18 03:56	1
Perfluorooctanesulfonic acid (PFOS)	3.2	M	1.3	0.31	ug/Kg	₩	05/14/18 13:10	05/29/18 03:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C5 PFNA	87		50 - 150				05/14/18 13:10	05/29/18 03:56	1
1802 PFHxS	76		50 - 150				05/14/18 13:10	05/29/18 03:56	1
13C4 PFOS	74		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 03:56	1

Client Sample ID: KLA-01-SB3-01 Lab Sample ID: 320-39023-13

 Date Collected: 05/02/18 14:25
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 77.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.38	0.099	ug/Kg	☼	05/14/18 13:10	05/29/18 04:04	1
Perfluorooctanoic acid (PFOA)	0.22	J	0.38	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 04:04	1
Perfluorononanoic acid (PFNA)	0.25	UM	0.38	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:04	1
Perfluorobutanesulfonic acid (PFBS)	0.13	J	0.51	0.075	ug/Kg	₽	05/14/18 13:10	05/29/18 04:04	1
Perfluorohexanesulfonic acid (PFHxS)	1.3		0.38	0.079	ug/Kg	₽	05/14/18 13:10	05/29/18 04:04	1
Perfluorooctanesulfonic acid (PFOS)	10		1.3	0.30	ug/Kg	☼	05/14/18 13:10	05/29/18 04:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	67		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C4-PFHpA	82		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	05/29/18 04:04	1
13C5 PFNA	84		50 - 150				05/14/18 13:10	05/29/18 04:04	1

Client Sample ID: KLA-01-SB3-02 Lab Sample ID: 320-39023-14

50 - 150

50 - 150

73

Date Collected: 05/02/18 14:30 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 78.1

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15								
Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25 U	0.38	0.099	ug/Kg	☆	05/14/18 13:10	05/29/18 04:12	1
Perfluorooctanoic acid (PFOA)	0.25 U	0.38	0.13	ug/Kg	☼	05/14/18 13:10	05/29/18 04:12	1
Perfluorononanoic acid (PFNA)	0.25 U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	05/29/18 04:12	1
Perfluorobutanesulfonic acid (PFBS)	0.23 U	0.51	0.075	ug/Kg	₽	05/14/18 13:10	05/29/18 04:12	1

05/14/18 13:10 05/29/18 04:04

05/14/18 13:10 05/29/18 04:04

1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA-01-SB3-02

Lab Sample ID: 320-39023-14 Date Collected: 05/02/18 14:30 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	0.32	J	0.38	0.078	ug/Kg	<u>∓</u>	05/14/18 13:10	05/29/18 04:12	1
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.3	0.30	ug/Kg	₽	05/14/18 13:10	05/29/18 04:12	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	67		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4-PFHpA	80		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4 PFOA	80		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C5 PFNA	82		50 - 150				05/14/18 13:10	05/29/18 04:12	1
1802 PFHxS	70		50 - 150				05/14/18 13:10	05/29/18 04:12	1
13C4 PFOS	64		50 - 150				05/14/18 13:10	05/29/18 04:12	1

Client Sample ID: KLA02-SB1-01 Lab Sample ID: 320-39023-15

Date Collected: 05/04/18 13:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.16	J	0.39	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Perfluorooctanoic acid (PFOA)	0.46	M	0.39	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 07:43	1
Perfluorononanoic acid (PFNA)	0.26	U	0.39	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Perfluorobutanesulfonic acid (PFBS)	0.25	J	0.52	0.077	ug/Kg	₽	05/14/18 14:03	05/29/18 07:43	1
Perfluorohexanesulfonic acid (PFHxS)	2.6		0.39	0.081	ug/Kg	₽	05/14/18 14:03	05/29/18 07:43	1
Perfluorooctanesulfonic acid (PFOS)	7.6	J1	1.3	0.31	ug/Kg	☼	05/14/18 14:03	05/29/18 07:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	81		50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C4-PFHpA	93		50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C4 PFOA	93		50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C5 PFNA	100		50 - 150				05/14/18 14:03	05/29/18 07:43	1
1802 PFHxS	88		50 - 150				05/14/18 14:03	05/29/18 07:43	1
13C4 PFOS	86		50 <sub>-</sub> 150				05/14/19 14:02	05/29/18 07:43	1

Client Sample ID: KLA02-SB1-02 Lab Sample ID: 320-39023-16

Date Collected: 05/04/18 13:45 **Matrix: Solid** Percent Solids: 80.8 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.18	J	0.36	0.095	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 08:07	1
Perfluorooctanoic acid (PFOA)	0.28	J M	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorononanoic acid (PFNA)	0.24	UM	0.36	0.098	ug/Kg	₩	05/14/18 14:03	05/29/18 08:07	1
Perfluorobutanesulfonic acid (PFBS)	0.22	J	0.49	0.072	ug/Kg	₽	05/14/18 14:03	05/29/18 08:07	1
Perfluorohexanesulfonic acid (PFHxS)	1.6		0.36	0.075	ug/Kg	₽	05/14/18 14:03	05/29/18 08:07	1
Perfluorooctanesulfonic acid (PFOS)	6.1		1.2	0.29	ug/Kg	☼	05/14/18 14:03	05/29/18 08:07	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB1-02 Lab Sample ID: 320-39023-16

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 80.8

Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	71	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4-PFHpA	81	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4 PFOA	84	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C5 PFNA	85	50 - 150	05/14/18 14:03	05/29/18 08:07	1
1802 PFHxS	77	50 - 150	05/14/18 14:03	05/29/18 08:07	1
13C4 PFOS	76	50 - 150	05/14/18 14:03	05/29/18 08:07	1

Client Sample ID: KLA02-SB2-01 Lab Sample ID: 320-39023-17

Date Received: 05/09/18 09:20								Percent Solid	ls: 79.0
Method: EPA 537 (Mod) - PFA						_			
Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.1		0.37		ug/Kg	<b>☆</b>		05/29/18 08:14	1
Perfluorooctanoic acid (PFOA)	2.2		0.37		ug/Kg	<b>:</b>		05/29/18 08:14	1
Perfluorononanoic acid (PFNA)	0.38		0.37		ug/Kg			05/29/18 08:14	1
Perfluorobutanesulfonic acid (PFBS)	5.1		0.50	0.074	ug/Kg	₽	05/14/18 14:03	05/29/18 08:14	1
Perfluorohexanesulfonic acid (PFHxS)	21		0.37	0.077	ug/Kg	☼	05/14/18 14:03	05/29/18 08:14	1
Perfluorooctanesulfonic acid (PFOS)	270	E	1.2	0.30	ug/Kg	₽	05/14/18 14:03	05/29/18 08:14	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	78		50 - 150				05/14/18 14:03	05/29/18 08:14	1
13C4-PFHpA	85		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 08:14	1
13C4 PFOA	94		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 08:14	1
13C5 PFNA	66		50 - 150				05/14/18 14:03	05/29/18 08:14	1
1802 PFHxS	78		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 08:14	1
13C4 PFOS	55		50 - 150				05/14/18 14:03	05/29/18 08:14	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	25	U	37	9.7	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 15:02	100
Perfluorooctanoic acid (PFOA)	25	U	37	12	ug/Kg	☼	05/14/18 14:03	05/29/18 15:02	100
Perfluorononanoic acid (PFNA)	25	U	37	10	ug/Kg	☼	05/14/18 14:03	05/29/18 15:02	100
Perfluorobutanesulfonic acid (PFBS)	22	U	50	7.4	ug/Kg		05/14/18 14:03	05/29/18 15:02	100
Perfluorohexanesulfonic acid (PFHxS)	21	J D	37	7.7	ug/Kg	₩	05/14/18 14:03	05/29/18 15:02	100
Perfluorooctanesulfonic acid (PFOS)	390	D	120	30	ug/Kg	≎	05/14/18 14:03	05/29/18 15:02	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	94	M	50 - 150				05/14/18 14:03	05/29/18 15:02	100
13C4-PFHpA	72		50 - 150				05/14/18 14:03	05/29/18 15:02	100
13C4 PFOA	87		50 - 150				05/14/18 14:03	05/29/18 15:02	100
13C5 PFNA	84		50 - 150					05/29/18 15:02	100
1802 PFHxS	66		50 - 150				05/14/18 14:03	05/29/18 15:02	100
13C4 PFOS	68		50 - 150					05/29/18 15:02	100
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Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB2-02

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: 320-39023-18 Date Collected: 05/04/18 13:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 59.2

Analyte	Result	Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.0		0.51	0.13	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 08:22	1
Perfluorooctanoic acid (PFOA)	18		0.51	0.17	ug/Kg	₩	05/14/18 14:03	05/29/18 08:22	1
Perfluorononanoic acid (PFNA)	0.30	J	0.51	0.14	ug/Kg	☼	05/14/18 14:03	05/29/18 08:22	1
Perfluorobutanesulfonic acid (PFBS)	26		0.68	0.10	ug/Kg	₽	05/14/18 14:03	05/29/18 08:22	1
Perfluorohexanesulfonic acid (PFHxS)	110	E	0.51	0.10	ug/Kg	₽	05/14/18 14:03	05/29/18 08:22	1
Perfluorooctanesulfonic acid (PFOS)	410	E	1.7	0.41	ug/Kg	₩	05/14/18 14:03	05/29/18 08:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	82		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C4-PFHpA	78		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C4 PFOA	89		50 - 150				05/14/18 14:03	05/29/18 08:22	1
13C5 PFNA	71		50 - 150				05/14/18 14:03	05/29/18 08:22	1
1802 PFHxS	72		50 - 150				05/14/18 14:03	05/29/18 08:22	1
							05/14/19 14:02	05/29/18 08:22	1
13C4 PFOS :   Method: EPA 537 (Mod) - PFA	60 S for QSM !	5.1. Table I	50 - 150 B-15 - DL				03/14/10 14.03	03/29/10 00.22	,
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	Qualifier		DL	Unit	D	Prepared	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA	S for QSM ! Result	•	B-15 - DL			D 		Analyzed	
Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	Qualifier J D	B-15 - DL LOQ	2.6			Prepared 05/14/18 14:03	Analyzed	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM (Result	Qualifier J D D	B-15 - DL LOQ 10	2.6 3.4	ug/Kg		Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07	Dil Fac
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 6.4 17	Qualifier  J D  D  U	B-15 - DL LOQ 10	2.6 3.4 2.7	ug/Kg ug/Kg		Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07	20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM !  Result  6.4  17  6.8	Qualifier J D D U	B-15 - DL LOQ 10 10	2.6 3.4 2.7 2.0	ug/Kg ug/Kg ug/Kg	<del>*</del> *	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM 9  Result  6.4  17  6.8  30  130	Qualifier J D D U	B-15 - DL LOQ 10 10 10	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	*	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM 9  Result  6.4  17  6.8  30  130	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07	20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM 8  Result  6.4  17  6.8  30  130  570	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14 10 34	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07 05/29/18 17:07	20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM (Result 6.4 17 6.8 30 130 570 %Recovery	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14 10 34	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed	20 20 20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	S for QSM 4 Result 6.4 17 6.8 30 130 570 %Recovery	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14 10 34 Limits 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM 4 Result 6.4 17 6.8 30 130 570 %Recovery 71 78	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14 10 34 Limits 50 - 150 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07  05/29/18 17:07	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM 4 Result 6.4 17 6.8 30 130 570 %Recovery 71 78 91	Qualifier J D D U D D D	B-15 - DL LOQ 10 10 10 14 10 34 Limits 50 - 150 50 - 150	2.6 3.4 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  Analyzed  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07  05/29/18 17:07	Dil Fac 20 20

Client Sample ID: KLA02-SB3-01 Lab Sample ID: 320-39023-19

Date Collected: 05/04/18 13:55 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 83.8

Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.47	0.36	0.094	ug/Kg	₩	05/14/18 14:03	05/29/18 08:30	1
Perfluorooctanoic acid (PFOA)	0.45	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 08:30	1
Perfluorononanoic acid (PFNA)	0.40	0.36	0.098	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1
Perfluorobutanesulfonic acid (PFBS)	0.50	0.48	0.071	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1
Perfluorohexanesulfonic acid (PFHxS)	5.4	0.36	0.075	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1
Perfluorooctanesulfonic acid (PFOS)	110 E M	1.2	0.29	ug/Kg	₽	05/14/18 14:03	05/29/18 08:30	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Samp	le ID:	KLA02-	SB3-01
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Date Collected: 05/04/18 13:55 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 83.8

Isotope Dilution	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
13C3-PFBS	78	50 - 150		05/14/18 14:03	05/29/18 08:30	1
13C4-PFHpA	86	50 - 150		05/14/18 14:03	05/29/18 08:30	1
13C4 PFOA	92	50 - 150		05/14/18 14:03	05/29/18 08:30	1
13C5 PFNA	85	50 - 150		05/14/18 14:03	05/29/18 08:30	1
1802 PFHxS	82	50 - 150		05/14/18 14:03	05/29/18 08:30	1
13C4 PFOS	68	50 - 150		05/14/18 14:03	05/29/18 08:30	1
Method: EPA 537 (Mod) - PFA	S for QSM 5.1, Table I	B-15 - DL				
Analyte	Result Qualifier	LOQ	DL Unit	D Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.8	U	7.2	1.9	ug/Kg	₩	05/14/18 14:03	05/29/18 14:30	20
Perfluorooctanoic acid (PFOA)	4.8	U	7.2	2.4	ug/Kg	☼	05/14/18 14:03	05/29/18 14:30	20
Perfluorononanoic acid (PFNA)	4.8	U	7.2	2.0	ug/Kg	☼	05/14/18 14:03	05/29/18 14:30	20
Perfluorobutanesulfonic acid (PFBS)	4.3	U	9.6	1.4	ug/Kg	₽	05/14/18 14:03	05/29/18 14:30	20
Perfluorohexanesulfonic acid (PFHxS)	5.7	J D	7.2	1.5	ug/Kg	₽	05/14/18 14:03	05/29/18 14:30	20
Perfluorooctanesulfonic acid (PFOS)	140	D	24	5.8	ug/Kg	₩	05/14/18 14:03	05/29/18 14:30	20
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

	•		•	•	
13C3-PFBS	77 M	50 - 150	05/14/18 14:03	05/29/18 14:30	20
13C4-PFHpA	84	50 - 150	05/14/18 14:03	05/29/18 14:30	20
13C4 PFOA	91	50 - 150	05/14/18 14:03	05/29/18 14:30	20
13C5 PFNA	100	50 - 150	05/14/18 14:03	05/29/18 14:30	20
1802 PFHxS	75	50 - 150	05/14/18 14:03	05/29/18 14:30	20
13C4 PFOS	74	50 - 150	05/14/18 14:03	05/29/18 14:30	20

Client Sample ID: KLA02-SB3-02

Lab Sample ID: 320-39023-20 Date Collected: 05/04/18 14:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 72.4

Date Received. 05/03/16 03.20								Percent Sono	5. 12.4
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table   Qualifier	B-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.81		0.41	0.11	ug/Kg	<u> </u>	05/14/18 14:03	05/29/18 08:38	1
Perfluorooctanoic acid (PFOA)	1.0		0.41	0.14	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorononanoic acid (PFNA)	0.12	J M	0.41	0.11	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorobutanesulfonic acid (PFBS)	1.8		0.55	0.081	ug/Kg	☼	05/14/18 14:03	05/29/18 08:38	1
Perfluorohexanesulfonic acid (PFHxS)	9.4		0.41	0.086	ug/Kg	₩	05/14/18 14:03	05/29/18 08:38	1
Perfluorooctanesulfonic acid (PFOS)	21	M	1.4	0.33	ug/Kg	₽	05/14/18 14:03	05/29/18 08:38	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4-PFHpA	80		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4 PFOA	90		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C5 PFNA	92		50 - 150				05/14/18 14:03	05/29/18 08:38	1
1802 PFHxS	80		50 - 150				05/14/18 14:03	05/29/18 08:38	1
13C4 PFOS	76		50 - 150				05/14/18 14:03	05/29/18 08:38	1
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Lab Sample ID: 320-39023-19

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA03-SB1-01 Lab Sample ID: 320-39023-21

 Date Collected: 05/01/18 09:00
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 77.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.39	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorooctanoic acid (PFOA)	0.26	UM	0.39	0.13	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorononanoic acid (PFNA)	0.26	U	0.39	0.10	ug/Kg	₩	05/14/18 13:10	05/29/18 04:19	1
Perfluorobutanesulfonic acid (PFBS)	0.082	J	0.52	0.076	ug/Kg	☼	05/14/18 13:10	05/29/18 04:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.99		0.39	0.080	ug/Kg	₽	05/14/18 13:10	05/29/18 04:19	1
Perfluorooctanesulfonic acid (PFOS)	3.0		1.3	0.31	ug/Kg	☼	05/14/18 13:10	05/29/18 04:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4 PFOA	85		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C5 PFNA	83		50 - 150				05/14/18 13:10	05/29/18 04:19	1
1802 PFHxS	71		50 - 150				05/14/18 13:10	05/29/18 04:19	1
13C4 PFOS	69		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 04:19	1

Client Sample ID: KLA03-SB1-02 Lab Sample ID: 320-39023-22

 Date Collected: 05/01/18 09:05
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 74.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.40	0.10	ug/Kg	☼	05/14/18 13:10	05/29/18 04:27	1
Perfluorooctanoic acid (PFOA)	0.22	J M	0.40	0.13	ug/Kg	☼	05/14/18 13:10	05/29/18 04:27	1
Perfluorononanoic acid (PFNA)	0.26	U	0.40	0.11	ug/Kg	☼	05/14/18 13:10	05/29/18 04:27	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.53	0.078	ug/Kg	<b>‡</b>	05/14/18 13:10	05/29/18 04:27	1
Perfluorohexanesulfonic acid (PFHxS)	2.4		0.40	0.082	ug/Kg	₽	05/14/18 13:10	05/29/18 04:27	1
Perfluorooctanesulfonic acid (PFOS)	17		1.3	0.32	ug/Kg	₽	05/14/18 13:10	05/29/18 04:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C4 PFOA	87		50 - 150				05/14/18 13:10	05/29/18 04:27	1
13C5 PFNA	91		50 - 150				05/14/18 13:10	05/29/18 04:27	1
18O2 PFHxS	74		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 04:27	1

Client Sample ID: KLA03-SB2-01 Lab Sample ID: 320-39023-23

50 - 150

71

Date Collected: 05/02/18 12:15 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 81.0

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.37	0.096	ug/Kg	☼	05/14/18 13:10	06/06/18 22:47	1
Perfluorooctanoic acid (PFOA)	0.15	J	0.37	0.12	ug/Kg	☼	05/14/18 13:10	06/06/18 22:47	1
Perfluorononanoic acid (PFNA)	0.25	U M	0.37	0.099	ug/Kg	☼	05/14/18 13:10	06/06/18 22:47	1
Perfluorobutanesulfonic acid (PFBS)	0.10	J	0.49	0.072	ug/Kg	₩	05/14/18 13:10	06/06/18 22:47	1

05/14/18 13:10 05/29/18 04:27

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA03-SB2-01

Lab Sample ID: 320-39023-23 Date Collected: 05/02/18 12:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 81.0

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.37	0.076	ug/Kg	<u>∓</u>	05/14/18 13:10	06/06/18 22:47	1
Perfluorooctanesulfonic acid (PFOS)	3.4		1.2	0.29	ug/Kg	☼	05/14/18 13:10	06/06/18 22:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	69		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4 PFOA	83		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C5 PFNA	81		50 - 150				05/14/18 13:10	06/06/18 22:47	1
1802 PFHxS	73		50 - 150				05/14/18 13:10	06/06/18 22:47	1
13C4 PFOS	72		50 <sub>-</sub> 150				05/14/18 13:10	06/06/18 22:47	1

Client Sample ID: KLA03-SB2-02 Lab Sample ID: 320-39023-24

Date Collected: 05/02/18 12:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.2

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	06/06/18 22:55	1
Perfluorooctanoic acid (PFOA)	0.15	J	0.38	0.13	ug/Kg	₩	05/14/18 13:10	06/06/18 22:55	1
Perfluorononanoic acid (PFNA)	0.26	U	0.38	0.10	ug/Kg	₩	05/14/18 13:10	06/06/18 22:55	1
Perfluorobutanesulfonic acid (PFBS)	0.15	J	0.51	0.075	ug/Kg	☼	05/14/18 13:10	06/06/18 22:55	1
Perfluorohexanesulfonic acid (PFHxS)	1.1		0.38	0.079	ug/Kg	₽	05/14/18 13:10	06/06/18 22:55	1
Perfluorooctanesulfonic acid (PFOS)	4.9	M	1.3	0.31	ug/Kg	☼	05/14/18 13:10	06/06/18 22:55	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C4 PFOA	82		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C5 PFNA	78		50 - 150				05/14/18 13:10	06/06/18 22:55	1
1802 PFHxS	75		50 - 150				05/14/18 13:10	06/06/18 22:55	1
13C4 PFOS	70		50 <sub>-</sub> 150				05/14/18 13:10	06/06/18 22:55	1

Lab Sample ID: 320-39023-25 Client Sample ID: KLA03-SB3-01

Date Collected: 05/01/18 08:45 **Matrix: Solid** Percent Solids: 74.9 Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.36	J	0.41	0.11	ug/Kg	<del>\</del>	05/14/18 13:10	06/06/18 23:03	1
Perfluorooctanoic acid (PFOA)	0.37	J	0.41	0.14	ug/Kg	☼	05/14/18 13:10	06/06/18 23:03	1
Perfluorononanoic acid (PFNA)	0.27	UM	0.41	0.11	ug/Kg	₩	05/14/18 13:10	06/06/18 23:03	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.54	0.080	ug/Kg	₽	05/14/18 13:10	06/06/18 23:03	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		0.41	0.084	ug/Kg	₽	05/14/18 13:10	06/06/18 23:03	1
Perfluorooctanesulfonic acid (PFOS)	3.2		1.4	0.32	ug/Kg	₽	05/14/18 13:10	06/06/18 23:03	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

13C4 PFOS

Client Sample ID: KLA03-SB3-01 Lab Sample ID: 320-39023-25

 Date Collected: 05/01/18 08:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 74.9

Isotope Dilution	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	78	50 - 150	05/14/18 13:10	06/06/18 23:03	1
13C4-PFHpA	85	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C4 PFOA	85	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C5 PFNA	87	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
1802 PFHxS	83	50 <sub>-</sub> 150	05/14/18 13:10	06/06/18 23:03	1
13C4 PFOS	79	50 - 150	05/14/18 13:10	06/06/18 23:03	1

Client Sample ID: KLA03-SB3-02 Lab Sample ID: 320-39023-26

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.59		0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Perfluorooctanoic acid (PFOA)	1.3		0.41	0.14	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Perfluorononanoic acid (PFNA)	0.27	U	0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Perfluorobutanesulfonic acid (PFBS)	0.75		0.54	0.080	ug/Kg	₽	05/14/18 13:10	06/06/18 23:10	1
Perfluorohexanesulfonic acid (PFHxS)	12		0.41	0.084	ug/Kg	₽	05/14/18 13:10	06/06/18 23:10	1
Perfluorooctanesulfonic acid (PFOS)	14	M	1.4	0.32	ug/Kg	☼	05/14/18 13:10	06/06/18 23:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	77		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C4-PFHpA	85		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	06/06/18 23:10	1
13C5 PFNA	83		50 - 150				05/14/18 13:10	06/06/18 23:10	1
1802 PFHxS	79		50 - 150				05/14/18 13:10	06/06/18 23:10	1

Client Sample ID: KLA04-SB1-01 Lab Sample ID: 320-39023-27

50 - 150

76

 Date Collected: 05/04/18 08:35
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 72.6

								· Oroonic Gonia	101 1210
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table I Qualifier	B-15 LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.66		0.42	0.11	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 08:54	1
Perfluorooctanoic acid (PFOA)	3.2		0.42	0.14	ug/Kg	☼	05/14/18 14:03	05/29/18 08:54	1
Perfluorononanoic acid (PFNA)	0.16	J M	0.42	0.11	ug/Kg	₩	05/14/18 14:03	05/29/18 08:54	1
Perfluorobutanesulfonic acid (PFBS)	0.45	J	0.56	0.082	ug/Kg	<b>*</b>	05/14/18 14:03	05/29/18 08:54	1
Perfluorohexanesulfonic acid (PFHxS)	24		0.42	0.086	ug/Kg	₩	05/14/18 14:03	05/29/18 08:54	1
Perfluorooctanesulfonic acid (PFOS)	930	E	1.4	0.33	ug/Kg	₽	05/14/18 14:03	05/29/18 08:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	87		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4-PFHpA	98		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4 PFOA	88		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C5 PFNA	37	Q	50 - 150				05/14/18 14:03	05/29/18 08:54	1
1802 PFHxS	87		50 - 150				05/14/18 14:03	05/29/18 08:54	1
13C4 PFOS	30	Q	50 - 150				05/14/18 14:03	05/29/18 08:54	1

TestAmerica Sacramento

05/14/18 13:10 06/06/18 23:10

Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley TestAmerica Job ID: 320-39023-1

Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table I	B-15 - DL						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	28	U	42	11	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorooctanoic acid (PFOA)	28	UM	42	14	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorononanoic acid (PFNA)	28	U	42	11	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Perfluorobutanesulfonic acid (PFBS)	25	U	56	8.2	ug/Kg	₽	05/14/18 14:03	05/29/18 15:33	100
Perfluorohexanesulfonic acid (PFHxS)	23	JD	42	8.6	ug/Kg	≎	05/14/18 14:03	05/29/18 15:33	100
Perfluorooctanesulfonic acid (PFOS)	2200	D	140	33	ug/Kg	₩	05/14/18 14:03	05/29/18 15:33	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	99	М	50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4-PFHpA	77		50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4 PFOA	93		50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C5 PFNA	79		50 - 150				05/14/18 14:03	05/29/18 15:33	100
1802 PFHxS	67		50 - 150				05/14/18 14:03	05/29/18 15:33	100
13C4 PFOS	70		50 - 150				05/14/18 14:03	05/29/18 15:33	100

Client Sample ID: KLA04-SB1-02	Lab Sample ID: 320-39023-28
Date Collected: 05/04/18 08:40	Matrix: Solid
Date Received: 05/09/18 09:20	Percent Solids: 77.2

ment Sample ID. NLA04-C	JD 1-02					LC	ib Gample	ID. 320-390	
Pate Collected: 05/04/18 08:40									: Solid
Pate Received: 05/09/18 09:20								Percent Solid	ls: 77.2
Method: EPA 537 (Mod) - PFA	S for OSM	5 1 Table I	R-15						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.4		0.39	0.10	ug/Kg	<u> </u>	05/14/18 14:03	05/29/18 09:02	
Perfluorooctanoic acid (PFOA)	19		0.39	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 09:02	1
Perfluorononanoic acid (PFNA)	0.60	M	0.39	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 09:02	1
Perfluorobutanesulfonic acid	14		0.52	0.077	ug/Kg	<b>\$</b>	05/14/18 14:03	05/29/18 09:02	1
Perfluorohexanesulfonic acid (PFHxS)	130	E	0.39	0.081	ug/Kg	₽	05/14/18 14:03	05/29/18 09:02	1
Perfluorooctanesulfonic acid (PFOS)	1800	E M	1.3	0.31	ug/Kg	₩	05/14/18 14:03	05/29/18 09:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	95		50 - 150				05/14/18 14:03	05/29/18 09:02	1
13C4-PFHpA	85		50 - 150				05/14/18 14:03	05/29/18 09:02	1
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 09:02	1
13C5 PFNA	34	Q	50 - 150				05/14/18 14:03	05/29/18 09:02	
1802 PFHxS	78		50 - 150				05/14/18 14:03	05/29/18 09:02	1
13C4 PFOS	26	Q	50 - 150				05/14/18 14:03	05/29/18 09:02	1
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1, Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.0	J D	7.8	2.0	ug/Kg	₩	05/14/18 14:03	05/29/18 17:15	20
Perfluorooctanoic acid (PFOA)	19	D	7.8	2.6	ug/Kg	₽	05/14/18 14:03	05/29/18 17:15	20
Perfluorononanoic acid (PFNA)	5.2	U	7.8	2.1	ug/Kg	₽	05/14/18 14:03	05/29/18 17:15	20
Perfluorobutanesulfonic acid (PFBS)	15	D	10	1.5	ug/Kg		05/14/18 14:03	05/29/18 17:15	20
Perfluorohexanesulfonic acid (PFHxS)	190	D	7.8	1.6	ug/Kg	₩	05/14/18 14:03	05/29/18 17:15	20
Perfluorooctanesulfonic acid (PFOS)	2900	E D	26	6.3	ug/Kg	₩	05/14/18 14:03	05/29/18 17:15	20
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70	М	50 - 150				05/14/18 14:03	05/29/18 17:15	20
13C4-PFHpA	84		50 - 150				05/14/18 14:03	05/29/18 17:15	20
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 17:15	20
13C5 PFNA	76		50 - 150				05/14/18 14:03	05/29/18 17:15	20

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple ID:	KLA04-9	SB1-02
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Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

Date Collected: 05/04/18 08:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.2

	wethod: EPA 537 (Mod) - PFA									
Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL2   Result Qualifier   LOQ   DL Unit   D   Prepared   Analyzed   Dil Fare Perfluoroptanoic acid (PFHpA)   26 U   39   10 Ug/Kg   0 05/14/18 14:03 05/29/18 15:41   10 Perfluoroptanoic acid (PFPA)   26 U   39   11 Ug/Kg   0 05/14/18 14:03 05/29/18 15:41   11 Ug/Kg   0 05/14/18 1	sotope Dilution		Qualifier	Limits				Prepared	Analyzed	Dil Fa
Mothod: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL2   Result   Qualifler   LOQ   DL Unit   D   Prepared   Analyzed   Dil Fa Feriturorheptanoic acid (PFHpA)   28 U   39   10   ug/Kg   0   05/14/18 14:03   05/29/18 15:41   10   10   10   10   10   10   10				50 - 150				05/14/18 14:03	05/29/18 17:15	2
Analyse Result Qualifier LOQ DL Unit D Prepared Analysed DIF Perfluoroneance acid (PFHA) 26 U 39 10 ug/Kg 10 05/14/18 14:03 05/29/18 15:41 10 10 10 10 10 10 10 10 10 10 10 10 10	3C4 PFOS	59		50 - 150				05/14/18 14:03	05/29/18 17:15	2
Perfluorocheptanole acid (PFHpA)	Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL2						
Perfluorocotanolo acid (PFDA)	Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluorononancia caid (PFNA)   26 U   39   11 ug/Kg   05/44/18 14:03 05/29/18 15:41   10   10   10   10   10   10   10	Perfluoroheptanoic acid (PFHpA)	26	U	39	10	ug/Kg	☆	05/14/18 14:03	05/29/18 15:41	10
Perfluorobutanesulfonic acid   10 J D   52   7.7	Perfluorooctanoic acid (PFOA)	17	J D	39	13	ug/Kg	≎	05/14/18 14:03	05/29/18 15:41	10
PFBS    Perfluorobexanesulfonic acid   160 D   39   8.1 ug/Kg   0   05/14/18 14.03   05/29/18 15/41   10   (PFHxS)   Perfluorobexanesulfonic acid   3600 E D M   130   31 ug/Kg   0   05/14/18 14.03   05/29/18 15/41   10   (PFDS)     13/23-PFBS   96 M   50.150   0   05/14/18 14.03   05/29/18 15/41   10   13/23-PFBS   96 M   50.150   0   05/14/18 14.03   05/29/18 15/41   10   13/23-PFBS   36 M   50.150   0   05/14/18 14.03   05/29/18 15/41   10   13/24-PFDA   30   50.150   0   05/14/18 14.03   05/29/18 15/41   10   13/24-PFDA   30   0   0   0   0   0   0   0   0	Perfluorononanoic acid (PFNA)	26	U	39	11	ug/Kg	≎	05/14/18 14:03	05/29/18 15:41	10
Perfluoroctanesulfonic acid   160   D   39   8.1 ug/Kg   © 05/14/18 14-03   05/29/18 15-41   10   10   10   10   10   10   10		10	JD	52	7.7	ug/Kg	₽	05/14/18 14:03	05/29/18 15:41	10
		160	D	39	8.1	ug/Kg	₽	05/14/18 14:03	05/29/18 15:41	10
1303.PFBS		3600	EDM	130	31	ug/Kg	☼	05/14/18 14:03	05/29/18 15:41	10
13C4-PFHpA	sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C4-PFHpA	3C3-PFBS	_		50 - 150				05/14/18 14:03	05/29/18 15:41	10
13C4 PFOA   95   50.150   05/14/18 14:03   05/29/18 15:41   10.10   13C5 PFNA   73   50.150   05/14/18 14:03   05/29/18 15:41   10.10   13C5 PFNA   73   50.150   05/14/18 14:03   05/29/18 15:41   10.10   13C5 PFNA   76   50.150   05/14/18 14:03   05/29/18 15:41   10.10   05/24/18 15:41   10.10	3C4-PFHpA			50 - 150						10
13C5 PFNA	•									10
1802 PFHxS   76   50 - 150   05/14/18 14:03   05/29/18 15:41   10   10   10   10   10   10   10										10
Company   Comp										
Collected: 05/04/18 08:20	002111110									
### Collected: 05/04/18 09:20    Matrix: Solide Received: 05/09/18 09:20    Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15   Result   Qualifier   LOQ   DL   Unit	I3C4 PEOS	• • • • • • • • • • • • • • • • • • • •		00 - 100					00.20.10.10.11	
Analyte   Result   Qualifier   LOQ   DL   Unit	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20	SB2-01					La	•	Matrix	c: Soli
Perfluorooctanoic acid (PFOA)   27   E   0.38   0.13   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluorononanoic acid (PFNA)   1.6   M   0.38   0.10   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluorobutanesulfonic acid   24   E   0.51   0.075   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluorohexanesulfonic acid   140   E   0.38   0.079   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perfluoroctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09     Perpared   Analyzed   Dil Ferman	lient Sample ID: KLA04-State Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20		5.1, Table	B-15			La	•	Matrix	c: Soli
Perfluoronanaioc acid (PFNA)   1.6 M   0.38   0.10 ug/Kg   0.5/14/18 14:03 05/29/18 09:09	lient Sample ID: KLA04-S ate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA	S for QSM !			DL	Unit			Matrix Percent Solic	c: Solid ls: 78.9
Perfluorobutanesulfonic acid   24 E   0.51   0.075   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09   (PFBS)	lient Sample ID: KLA04-State Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA Analyte	S for QSM (		LOQ			D	Prepared	Matrix Percent Solic Analyzed	c: Solid ls: 78.
Perfluorohexanesulfonic acid   140   E   0.38   0.079   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09   Perfluorohexanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09   Perfluorooctanesulfonic acid   2600   E   1.3   0.31   ug/Kg   0.5/14/18 14:03   0.5/29/18 09:09   O.5/14/18 14:03   O.5/29/18 09:09   O.5/29/29/29/29/29/29/29/29/29/29/29/29/29/	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	S for QSM 9 Result	Qualifier		0.10	ug/Kg	<b>D</b>	Prepared 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09	c: Soli ls: 78.
Perfluorooctanesulfonic acid   2600 E	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM (Result 14 27	Qualifier E	0.38 0.38	0.10 0.13	ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09	c: Solidis: 78.
Solution   Section   Sec	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	S for QSM ( Result 14 27 1.6	Qualifier E M	0.38 0.38 0.38	0.10 0.13 0.10	ug/Kg ug/Kg ug/Kg	D \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solidis: 78.
13C3-PFBS	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid PFBS) Perfluorohexanesulfonic acid	Result 14 27 1.6 24	Qualifier  E M E	0.38 0.38 0.38 0.51	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D \$\pi\$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solids: 78.
13C4-PFHpA 88 50 - 150 05/14/18 14:03 05/29/18 09:09 13C4 PFOA 83 50 - 150 05/14/18 14:03 05/29/18 09:09 13C5 PFNA 25 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 18O2 PFHxS 86 50 - 150 05/14/18 14:03 05/29/18 09:09 13C4 PFOS 18 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 13C4 PFOS 18 Q 50 - 150 05/14/18 14:03 05/29/18 09:09  Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL Analyte Result Qualifier LOQ DL Unit D Prepared Analyzed Dil Fa Perfluoroheptanoic acid (PFHpA) 14 J D 38 10 ug/Kg 05/14/18 14:03 05/29/18 15:49 10 Perfluorooctanoic acid (PFOA) 26 J D M 38 13 ug/Kg 05/14/18 14:03 05/29/18 15:49 10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFHpS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM (Result 14 27 1.6 24 140 2600	Qualifier  E M E	0.38 0.38 0.38 0.51	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solids: 78.
13C4 PFOA 83 50 - 150 05/14/18 14:03 05/29/18 09:09 13C5 PFNA 25 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 18O2 PFHxS 86 50 - 150 05/14/18 14:03 05/29/18 09:09 13C4 PFOS 18 Q 50 - 150 05/14/18 14:03 05/29/18 09:09  Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL Analyte Result Qualifier LOQ DL Unit D Prepared Analyzed Dil Fa Perfluoroheptanoic acid (PFHpA) 14 J D 38 10 ug/Kg 05/14/18 14:03 05/29/18 15:49 10 Perfluorooctanoic acid (PFOA) 26 J D M 38 13 ug/Kg 05/14/18 14:03 05/29/18 15:49 10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFHpS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM (Result 14 27 1.6 24 140 2600	Qualifier  E M E	0.38 0.38 0.38 0.51 0.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 Analyzed	c: Soli ls: 78.
13C5 PFNA 25 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 18O2 PFHxS 86 50 - 150 05/14/18 14:03 05/29/18 09:09 13C4 PFOS 18 Q 50 - 150 05/14/18 14:03 05/29/18 09:09 05/14/18 14:03 05/29/18 15:49 05/14/18 14:03 05/29/18 1	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFOS) Sotope Dilution	S for QSM 9  Result  14  27  1.6  24  140  2600  %Recovery	Qualifier  E M E	0.38 0.38 0.38 0.51 0.38	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid Analyzed 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 Analyzed	c: Soli ls: 78.
1802 PFHxS       86       50 - 150       05/14/18 14:03 05/29/18 09:09         13C4 PFOS       18 Q       50 - 150       05/14/18 14:03 05/29/18 09:09         Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL         Analyte       Result Qualifier       LOQ DL Unit ug/Kg       D Prepared Not/14/18 14:03 05/29/18 15:49       Dil Fa         Perfluoroheptanoic acid (PFHpA)       14 J D       38       10 ug/Kg       05/14/18 14:03 05/29/18 15:49       10         Perfluorooctanoic acid (PFOA)       26 J D M       38       13 ug/Kg       05/14/18 14:03 05/29/18 15:49       10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorobexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFNS) Porfluorooctanesulfonic acid (PFNS)	S for QSM 9 Result 14 27 1.6 24 140 2600  **Recovery* 96	Qualifier  E M E E Qualifier	0.38 0.38 0.38 0.51 0.38 1.3  Limits 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  4nalyzed  05/29/18 09:09	c: Soli ls: 78. Dil Fa
1802 PFHxS       86       50 - 150       05/14/18 14:03 05/29/18 09:09         13C4 PFOS       18 Q       50 - 150       05/14/18 14:03 05/29/18 09:09         Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL         Analyte       Result Qualifier       LOQ DL Unit ug/Kg       D Prepared Not/14/18 14:03 05/29/18 15:49       Dil Fa         Perfluoroheptanoic acid (PFHpA)       14 J D       38       10 ug/Kg       05/14/18 14:03 05/29/18 15:49       10         Perfluorooctanoic acid (PFOA)       26 J D M       38       13 ug/Kg       05/14/18 14:03 05/29/18 15:49       10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFNA)  Perfluorobutanesulfonic acid (PFNS)  Perfluorobexanesulfonic acid (PFNS)	S for QSM 9 Result 14 27 1.6 24 140 2600 %Recovery 96 88	Qualifier  E M E E C Qualifier	0.38 0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Solids: 78.  Dil Fa
Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL         DL         Unit         D         Prepared         Analyzed         Dil Fa           Perfluoroheptanoic acid (PFHpA)         14         J D         38         10         ug/Kg         ©5/14/18 14:03         05/29/18 15:49         10           Perfluorooctanoic acid (PFOA)         26         J D M         38         13         ug/Kg         ©5/14/18 14:03         05/29/18 15:49         10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Page 13/03/19/19/19/19/19/19/19/19/19/19/19/19/19/	14 27 1.6 24 140 2600 %Recovery 96 88 83	Qualifier  E M E E C Qualifier	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Soli ls: 78. Dil Fa
Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL           Analyte         Result         Qualifier         LOQ         DL         Unit         D         Prepared         Analyzed         Dil Fa           Perfluoroheptanoic acid (PFHpA)         14         J D         38         10         ug/Kg         © 05/14/18 14:03         05/29/18 15:49         10           Perfluorooctanoic acid (PFOA)         26         J D M         38         13         ug/Kg         © 05/14/18 14:03         05/29/18 15:49         10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA  Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFNA)  Perfluorobutanesulfonic acid  PFBS)  Perfluorohexanesulfonic acid  PFHxS)  Perfluorooctanesulfonic acid  PFHxS)  Perfluorooctanesulfonic acid  PFOS)  sotope Dilution  3C3-PFBS  3C4-PFHpA  3C4 PFOA	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25	Qualifier  E M E E C Qualifier	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Soli ls: 78.
Analyte         Result Qualifier         LOQ         DL unit         D unit         D verpared Distriction         Analyzed Distriction         Distriction           Perfluoroheptanoic acid (PFHpA)         14 J D         38         10 ug/Kg         05/14/18 14:03         05/29/18 15:49         10           Perfluorooctanoic acid (PFOA)         26 J D M         38         13 ug/Kg         05/14/18 14:03         05/29/18 15:49         10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86	Qualifier  E M E E Qualifier	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Soli ls: 78.
Perfluoroheptanoic acid (PFHpA)         14 J D         38         10 ug/Kg         © 05/14/18 14:03         05/29/18 15:49         10 ug/Kg           Perfluorooctanoic acid (PFOA)         26 J D M         38         13 ug/Kg         © 05/14/18 14:03         05/29/18 15:49         10 ug/Kg	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18	Qualifier  E M E E Qualifier  Q	0.38 0.38 0.51 0.38 1.3  Limits 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150	0.10 0.13 0.10 0.075 0.079	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	c: Soli ls: 78.
Perfluorooctanoic acid (PFOA) 26 J D M 38 13 ug/Kg © 05/14/18 14:03 05/29/18 15:49 10	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA  Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobexanesulfonic aci	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (S for QSM	Qualifier  E M E E Qualifier  Q Q Q 5.1, Table	LOQ  0.38  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	Dil Fa
	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20 ate Received: 05/09/	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (Result Result 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Qualifier  E M E E Qualifier  Q Q Q Q 5.1, Table Qualifier	LOQ  0.38  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  B-15 - DL  LOQ	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	Dil Fa
	lient Sample ID: KLA04-Sate Collected: 05/04/18 08:20 ate Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA  Analyte  Perfluoroheptanoic acid (PFHpA)  Perfluorooctanoic acid (PFNA)  Perfluorobutanesulfonic acid (PFNA)  Perfluorobutanesulfonic acid (PFNA)  Perfluorobutanesulfonic acid (PFNA)  Perfluorooctanesulfonic acid (PFNA)  Perfluorooctanesulfonic acid (PFNA)  Perfluorooctanesulfonic acid (PFNA)  Perfluorooctanesulfonic acid (PFNA)  Sotope Dilution  SC3-PFBS  SC4-PFHpA  SC4-PFHpA  SC4-PFOS  Method: EPA 537 (Mod) - PFA  Analyte  Perfluoroheptanoic acid (PFHpA)	S for QSM (Result 14 27 1.6 24 140 2600 %Recovery 96 88 83 25 86 18 S for QSM (Result 14	Qualifier  E M E E Qualifier  Q Q Q Q D.1, Table Qualifier J D	LOQ  0.38  0.38  0.38  0.51  0.38  1.3  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 350  B-15 - DL  LOQ  38	0.10 0.13 0.10 0.075 0.079 0.31	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Matrix Percent Solid  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09  Analyzed  05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09 05/29/18 09:09	Dil Fa

Lab Sample ID: 320-39023-28

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA04-SB2-01

Lab Sample ID: 320-39023-29 Date Collected: 05/04/18 08:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	14	J D	51	7.5	ug/Kg	<del>\$</del>	05/14/18 14:03	05/29/18 15:49	100
Perfluorohexanesulfonic acid (PFHxS)	200	D	38	7.9	ug/Kg	\$	05/14/18 14:03	05/29/18 15:49	100
Perfluorooctanesulfonic acid (PFOS)	6600	E D	130	31	ug/Kg	₽	05/14/18 14:03	05/29/18 15:49	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	111	М	50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C4 PFOA	80		50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C5 PFNA	68		50 - 150				05/14/18 14:03	05/29/18 15:49	100
1802 PFHxS	64		50 - 150				05/14/18 14:03	05/29/18 15:49	100
13C4 PFOS	58		50 - 150				05/14/18 14:03	05/00/40 45:40	100

Client Sample ID: KLA04-SB2-02 Lab Sample ID: 320-39023-30

Date Collected: 05/04/18 08:25

ate Collected: 05/04/18 08:25 ate Received: 05/09/18 09:20								Matrix Percent Solid	:: Solid ls: 76.0
Method: EPA 537 (Mod) - PFA		*	B-15 LOQ	DI	Unit				Dil Fac
Analyte		Qualifier	0.39			D <u>∓</u>	Prepared	Analyzed 05/29/18 09:17	
Perfluoroheptanoic acid (PFHpA)	45				ug/Kg	74. 24.			1
Perfluorooctanoic acid (PFOA)	200	E	0.39		ug/Kg	<del>1,</del>		05/29/18 09:17	1
Perfluorononanoic acid (PFNA)	1.6		0.39		ug/Kg	- <del>Q</del> -		05/29/18 09:17	
Perfluorobutanesulfonic acid (PFBS)	91	E	0.53	0.078	ug/Kg	₽	05/14/18 14:03	05/29/18 09:17	1
Perfluorohexanesulfonic acid (PFHxS)	510	E	0.39	0.082	ug/Kg	☼	05/14/18 14:03	05/29/18 09:17	1
Perfluorooctanesulfonic acid (PFOS)	2100	E	1.3	0.32	ug/Kg	₩	05/14/18 14:03	05/29/18 09:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	125		50 - 150				05/14/18 14:03	05/29/18 09:17	1
13C4-PFHpA	69		50 - 150				05/14/18 14:03	05/29/18 09:17	1
13C4 PFOA	82		50 - 150				05/14/18 14:03	05/29/18 09:17	1
13C5 PFNA	55		50 - 150				05/14/18 14:03	05/29/18 09:17	1
1802 PFHxS	65		50 - 150				05/14/18 14:03	05/29/18 09:17	1
13C4 PFOS	39	Q	50 - 150				05/14/18 14:03	05/29/18 09:17	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	44	D	39	10	ug/Kg	₽	05/14/18 14:03	05/29/18 15:57	100
Perfluorooctanoic acid (PFOA)	210	D	39	13	ug/Kg	☼	05/14/18 14:03	05/29/18 15:57	100
Perfluorononanoic acid (PFNA)	26	UM	39	11	ug/Kg	≎	05/14/18 14:03	05/29/18 15:57	100
Perfluorobutanesulfonic acid (PFBS)	84	D	53	7.8	ug/Kg	☼	05/14/18 14:03	05/29/18 15:57	100
Perfluorohexanesulfonic acid (PFHxS)	1100	D	39	8.2	ug/Kg	₽	05/14/18 14:03	05/29/18 15:57	100
Perfluorooctanesulfonic acid (PFOS)	4800	E D M	130	32	ug/Kg	₩	05/14/18 14:03	05/29/18 15:57	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	133	М	50 - 150				05/14/18 14:03	05/29/18 15:57	100
13C4-PFHpA	70		50 - 150				05/44/40 44:00	05/29/18 15:57	100

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

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Lab Sample ID: 320-39023-30 Date Collected: 05/04/18 08:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 76.0

Method: EPA 537 (Mod)	) - PFAS for QSM 5.1, Table I	B-15 - DL (Continued)			
Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	95	50 - 150	05/14/18 14:03	05/29/18 15:57	100
13C5 PFNA	78	50 - 150	05/14/18 14:03	05/29/18 15:57	100
1802 PFHxS	78	50 - 150	05/14/18 14:03	05/29/18 15:57	100
13C4 PFOS	61	50 - 150	05/14/18 14:03	05/29/18 15:57	100

Client Sample ID: KLA04-SB3-01 Lab Sample ID: 320-39023-31

Date Collected: 05/04/18 08:05 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	3.8		0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 09:25	
Perfluorooctanoic acid (PFOA)	12		0.38	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 09:25	
Perfluorononanoic acid (PFNA)	1.1	M	0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 09:25	
Perfluorobutanesulfonic acid (PFBS)	19		0.51	0.076	ug/Kg	₩	05/14/18 14:03	05/29/18 09:25	
Perfluorohexanesulfonic acid (PFHxS)	51	E	0.38	0.079	ug/Kg	₩	05/14/18 14:03	05/29/18 09:25	
Perfluorooctanesulfonic acid (PFOS)	1600	E	1.3	0.31	ug/Kg	₽	05/14/18 14:03	05/29/18 09:25	
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	86		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4-PFHpA	88		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C5 PFNA	28	Q	50 - 150				05/14/18 14:03	05/29/18 09:25	
1802 PFHxS	77		50 - 150				05/14/18 14:03	05/29/18 09:25	
13C4 PFOS	20	Q	50 - 150				05/14/18 14:03	05/29/18 09:25	
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table I Qualifier	3-15 - DL LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	3.7	JD	7.7	2.0	ug/Kg	<u>₩</u>	05/14/18 14:03	05/29/18 17:23	2
Perfluorooctanoic acid (PFOA)	12	D	7.7	2.6	ug/Kg	☼	05/14/18 14:03	05/29/18 17:23	2
Perfluorononanoic acid (PFNA)	5.1	U M	7.7	2.1	ug/Kg	☼	05/14/18 14:03	05/29/18 17:23	2
Perfluorobutanesulfonic acid (PFBS)	24	D	10	1.5	ug/Kg	₽	05/14/18 14:03	05/29/18 17:23	
Perfluorohexanesulfonic acid (PFHxS)	53	D	7.7	1.6	ug/Kg	₩	05/14/18 14:03	05/29/18 17:23	:
Perfluorooctanesulfonic acid (PFOS)	3500	E D	26	6.1	ug/Kg	₩	05/14/18 14:03	05/29/18 17:23	2
							Prepared	Analyzed	Dil F
Isotope Dilution	%Recovery	Qualifier	Limits				rroparoa	Allalyzeu	
•	%Recovery 54	Qualifier	50 - 150					05/29/18 17:23	
13C3-PFBS	-	Qualifier					05/14/18 14:03		- 2
13C3-PFBS 13C4-PFHpA	54	Qualifier	50 - 150				05/14/18 14:03 05/14/18 14:03	05/29/18 17:23	
13C3-PFBS 13C4-PFHpA 13C4-PFOA	54 75	Qualifier	50 - 150 50 - 150				05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23	2
13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA	54 75 82	Qualifier	50 - 150 50 - 150 50 - 150				05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	
13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS	54 75 82 59		50 - 150 50 - 150 50 - 150 50 - 150				05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	
Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA	54 75 82 59 69 47	Q 5.1, Table I	50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 <b>3-15 - DL2</b>				05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23	2 2 2 2 2
13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	54 75 82 59 69 47 AS for QSM {	Q 5.1, Table I Qualifier	50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 <b>3-15 - DL2</b>		Unit	D	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed	2 2 2 2 2 2 2 2 2
13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS Method: EPA 537 (Mod) - PFA	54 75 82 59 69 47 AS for QSM { Result	Q 5.1, Table I	50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 50 - 150 <b>3-15 - DL2</b>	10	<b>Unit</b> ug/Kg ug/Kg	<b>D</b>	05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 Prepared 05/14/18 14:03	05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 05/29/18 17:23 Analyzed	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Isotope Dilution

13C3-PFBS

Client Sample ID: KLA04-SB3-01

Lab Sample ID: 320-39023-31 Date Collected: 05/04/18 08:05 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	26	U	38	10	ug/Kg	₽	05/14/18 14:03	05/29/18 16:12	100
Perfluorobutanesulfonic acid (PFBS)	16	J D	51	7.6	ug/Kg	₩	05/14/18 14:03	05/29/18 16:12	100
Perfluorohexanesulfonic acid (PFHxS)	61	D	38	7.9	ug/Kg	₩	05/14/18 14:03	05/29/18 16:12	100
Perfluorooctanesulfonic acid (PFOS)	4500	E D	130	31	ug/Kg	₽	05/14/18 14:03	05/29/18 16:12	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	71	М	50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4 PFOA	78		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C5 PFNA	73		50 - 150				05/14/18 14:03	05/29/18 16:12	100
1802 PFHxS	53		50 - 150				05/14/18 14:03	05/29/18 16:12	100
13C4 PFOS	57		50 - 150				05/14/18 14:03	05/29/18 16:12	100

Client Sample ID: KLA04-SB3-02 Lab Sample ID: 320-39023-32

Date Collected: 05/04/18 08:10 **Matrix: Solid** 

Date Received: 05/09/18 09:20								Percent Solid	ls: 65.2
Method: EPA 537 (Mod) - PFA	S for QSM (	5.1, Table	B-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	29		0.46	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 09:33	
Perfluorooctanoic acid (PFOA)	83	E	0.46	0.15	ug/Kg	₩	05/14/18 14:03	05/29/18 09:33	1
Perfluorononanoic acid (PFNA)	1.2		0.46	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 09:33	1
Perfluorobutanesulfonic acid (PFBS)	80	E	0.61	0.091	ug/Kg	₽	05/14/18 14:03	05/29/18 09:33	1
Perfluorohexanesulfonic acid (PFHxS)	410	E	0.46	0.095	ug/Kg	₽	05/14/18 14:03	05/29/18 09:33	1
Perfluorooctanesulfonic acid (PFOS)	1900	E M	1.5	0.37	ug/Kg	☼	05/14/18 14:03	05/29/18 09:33	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	109		50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4-PFHpA	77		50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4 PFOA	87		50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C5 PFNA	51		50 - 150				05/14/18 14:03	05/29/18 09:33	1
1802 PFHxS	65		50 - 150				05/14/18 14:03	05/29/18 09:33	1
13C4 PFOS	39	Q	50 - 150				05/14/18 14:03	05/29/18 09:33	1
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1, Table	B-15 - DL						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	27	D	9.2	2.4	ug/Kg	☼	05/14/18 14:03	05/29/18 17:31	20
Perfluorooctanoic acid (PFOA)	85	D	9.2	3.1	ug/Kg	₩	05/14/18 14:03	05/29/18 17:31	20
Perfluorononanoic acid (PFNA)	6.1	U M	9.2	2.5	ug/Kg	₩	05/14/18 14:03	05/29/18 17:31	20
Perfluorobutanesulfonic acid (PFBS)	110	D	12	1.8	ug/Kg	₽	05/14/18 14:03	05/29/18 17:31	20
Perfluorohexanesulfonic acid (PFHxS)	730	E D	9.2	1.9	ug/Kg	☼	05/14/18 14:03	05/29/18 17:31	20
Perfluorooctanesulfonic acid (PFOS)	3500	EDM	31	7.4	ug/Kg	₽	05/14/18 14:03	05/29/18 17:31	20

Analyzed

Dil Fac

Prepared

05/14/18 14:03 05/29/18 17:31

Limits

50 - 150

%Recovery Qualifier

88

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Isotope Dilution

1802 PFHxS

13C4 PFOS

Perfluoroheptanoic acid (PFHpA)

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

%Recovery Qualifier

Client Sample ID: KLA04-SB3-02	Lab Sample ID: 320-39023-32
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 Date Collected: 05/04/18 08:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 65.2

Prepared

Analyzed

Dil Fac

1201 DELLa A		Qualifier					riepaieu	Allalyzeu	
13C4-PFHpA	84		50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C4 PFOA	87		50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C5 PFNA	78		50 - 150				05/14/18 14:03	05/29/18 17:31	20
1802 PFHxS	76		50 - 150				05/14/18 14:03	05/29/18 17:31	20
13C4 PFOS	63		50 - 150				05/14/18 14:03	05/29/18 17:31	20
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1. Table l	3-15 - DL2						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	33	JD	46	12	ug/Kg	₩	05/14/18 14:03	-	100
Perfluorooctanoic acid (PFOA)	79	D	46	15	ug/Kg	₽	05/14/18 14:03	05/29/18 16:20	100
Perfluorononanoic acid (PFNA)	31	UM	46	12	ug/Kg	₽	05/14/18 14:03	05/29/18 16:20	100
Perfluorobutanesulfonic acid (PFBS)	110	D	61	9.1	ug/Kg	₽	05/14/18 14:03	05/29/18 16:20	100
Perfluorohexanesulfonic acid (PFHxS)	730	D	46	9.5	ug/Kg	₩	05/14/18 14:03	05/29/18 16:20	100
Perfluorooctanesulfonic acid (PFOS)	3800	EDM	150	37	ug/Kg	₩	05/14/18 14:03	05/29/18 16:20	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	72	М	50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C4-PFHpA	62		50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C4 PFOA	89		50 - 150				05/14/18 14:03	05/29/18 16:20	100
12CE DENA	78		50 - 150				05/14/18 14:03	05/29/18 16:20	100
13C5 PFNA	70		30 - 130						
1305 PFNA 1802 PFHxS	69		50 - 150 50 - 150				05/14/18 14:03	05/29/18 16:20	100
								05/29/18 16:20 05/29/18 16:20	100 100
1802 PFHxS	69 64		50 - 150			La	05/14/18 14:03		100
1802 PFHxS 13C4 PFOS	69 64		50 - 150			La	05/14/18 14:03	05/29/18 16:20 ID: <b>320-39</b> 0	100
1802 PFHxS 13C4 PFOS Client Sample ID: KLA05-	69 64		50 - 150			La	05/14/18 14:03 ab Sample	05/29/18 16:20 ID: <b>320-39</b> 0	100 23-33 :: Solid
1802 PFHxS 13C4 PFOS Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20	69 64 SB1-01	5.1 Table	50 - 150 50 - 150			La	05/14/18 14:03 ab Sample	05/29/18 16:20 ID: 320-390 Matrix	100 23-33 :: Solid
1802 PFHxS 13C4 PFOS Client Sample ID: KLA05-State Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA	69 64 SB1-01	5.1, Table   Qualifier	50 - 150 50 - 150	DL	Unit	La	05/14/18 14:03 ab Sample	05/29/18 16:20 ID: 320-390 Matrix	100 23-33 :: Solid
1802 PFHxS 13C4 PFOS Client Sample ID: KLA05-Coate Collected: 05/05/18 09:00 Oate Received: 05/09/18 09:20 Method: EPA 537 (Mod) - PFA Analyte	69 64 SB1-01		50 - 150 50 - 150 3-15		<b>Unit</b> ug/Kg	D	05/14/18 14:03 <b>b Sample</b>	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed	100 23-33 :: Solid s: 79.9
1802 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)	SB1-01 S for QSM (Result		50 - 150 50 - 150 3-15 LOQ	0.098		D	05/14/18 14:03 <b>Ib Sample</b> Prepared	05/29/18 16:20 ID: 320-390 Matrix Percent Solid  Analyzed  05/29/18 09:41	100 23-33 :: Solid s: 79.9
1802 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	69 64 SB1-01 S for QSM 8 Result 1.6	Qualifier	50 - 150 50 - 150 3-15 LOQ 0.38	0.098 0.13	ug/Kg	<b>D</b> ☆	05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41	100 23-33 :: Solid s: 79.9
1802 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid	69 64 SB1-01 S for QSM 4 Result 1.6 2.3	Qualifier	50 - 150 50 - 150 B-15 LOQ 0.38 0.38	0.098 0.13 0.10	ug/Kg ug/Kg	D \$\frac{\pi}{\pi}\$	05/14/18 14:03 <b>Prepared</b> 05/14/18 14:03 05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41 05/29/18 09:41	100 23-33 :: Solid s: 79.9
1802 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	69 64 SB1-01 S for QSM ! Result 1.6 2.3 0.61	Qualifier M	50 - 150 50 - 150 B-15 LOQ 0.38 0.38 0.38	0.098 0.13 0.10	ug/Kg ug/Kg ug/Kg ug/Kg	— <b>D</b>	O5/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41  05/29/18 09:41  05/29/18 09:41	100 23-33 :: Solid s: 79.9 Dil Fac
1802 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid	SB1-01 S for QSM (Result 1.6 2.3 0.61 4.9	Qualifier M	50 - 150 50 - 150 B-15 LOQ 0.38 0.38 0.38 0.50	0.098 0.13 0.10 0.074 0.078	ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41  05/29/18 09:41  05/29/18 09:41	100 23-33 :: Solid s: 79.9 Dil Fac
2 PFHxS 13C4 PFOS  Client Sample ID: KLA05-3 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	69 64 SB1-01 S for QSM 4 Result 1.6 2.3 0.61 4.9	M E E	50 - 150 50 - 150 3-15 LOQ 0.38 0.38 0.38 0.50 0.38	0.098 0.13 0.10 0.074 0.078	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41	100 23-33 :: Solid s: 79.9 Dil Fac
Client Sample ID: KLA05-30 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20 Description of the Collected: 05/05/18 09:00 Description of the Collected: 05/05/18 09:20 Description of the Coll	69 64 SB1-01 S for QSM 8 Result 1.6 2.3 0.61 4.9 74	M E E	3-15 LOQ 0.38 0.38 0.38 0.50 0.38	0.098 0.13 0.10 0.074 0.078	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared 05/14/18 14:03  Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	05/29/18 16:20  ID: 320-390 Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41  05/29/18 09:41	100 23-33 :: Solid s: 79.9 Dil Fac 1 1 1 1
Client Sample ID: KLA05-30 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20 Detected: 05/09/18 Detected:	69 64 SB1-01 S for QSM 8 Result 1.6 2.3 0.61 4.9 74 130 %Recovery	M E E	50 - 150 50 - 150 B-15 LOQ 0.38 0.38 0.38 0.50 0.38 1.3	0.098 0.13 0.10 0.074 0.078	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	05/29/18 16:20  ID: 320-390 Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41  05/29/18 09:41	Dil Fac  Dil Fac  Dil Fac  Dil Fac  Dil Fac
Dient Sample ID: KLA05-30 Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20 Date Received: 05/09/18 09:20 Defined by the Collected: 05/09/18 Defin	69 64 SB1-01 S for QSM (Result 1.6 2.3 0.61 4.9 74 130 %Recovery 72	M E E	50 - 150 50 - 150 B-15 LOQ 0.38 0.38 0.50 0.38 1.3 Limits 50 - 150	0.098 0.13 0.10 0.074 0.078	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	D	Prepared  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	05/29/18 16:20  ID: 320-390  Matrix Percent Solid  Analyzed  05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41 05/29/18 09:41  05/29/18 09:41  Analyzed  05/29/18 09:41	100 23-33 :: Solid s: 79.9  Dil Fac 1 1 1 1 1 Dil Fac 1

© 05/14/18 14:03 05/29/18 14:38 20

Analyzed

05/14/18 14:03 05/29/18 09:41

05/14/18 14:03 05/29/18 09:41

Prepared

1

7.6

DL Unit

2.0 ug/Kg

50 - 150

50 - 150

68

68

Result Qualifier

5.0 U

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB1-01 Lab Sample ID: 320-39023-33

 Date Collected: 05/05/18 09:00
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 79.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	5.0	UM	7.6	2.5	ug/Kg	₩	05/14/18 14:03	05/29/18 14:38	20
Perfluorononanoic acid (PFNA)	5.0	U	7.6	2.0	ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20
Perfluorobutanesulfonic acid (PFBS)	6.2	J D	10	1.5	ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20
Perfluorohexanesulfonic acid (PFHxS)	78	D	7.6	1.6	ug/Kg	₽	05/14/18 14:03	05/29/18 14:38	20
Perfluorooctanesulfonic acid (PFOS)	170	D	25	6.0	ug/Kg	☼	05/14/18 14:03	05/29/18 14:38	20
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	54		50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4-PFHpA	83		50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4 PFOA	97		50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C5 PFNA	90		50 - 150				05/14/18 14:03	05/29/18 14:38	20
1802 PFHxS	75		50 - 150				05/14/18 14:03	05/29/18 14:38	20
13C4 PFOS	69		50 - 150				05/14/18 14:03	05/29/18 14:38	20

Client Sample ID: KLA05-SB1-02 Lab Sample ID: 320-39023-34

 Date Collected: 05/05/18 09:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 78.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25	U	0.38	0.098	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 14:15	1
Perfluorooctanoic acid (PFOA)	0.23	J	0.38	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 14:15	1
Perfluorononanoic acid (PFNA)	0.25	U	0.38	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 14:15	1
Perfluorobutanesulfonic acid (PFBS)	0.077	J	0.50	0.074	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	2.6		0.38	0.078	ug/Kg	₿	05/14/18 14:03	05/29/18 14:15	1
Perfluorooctanesulfonic acid (PFOS)	6.5		1.3	0.30	ug/Kg	₽	05/14/18 14:03	05/29/18 14:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 14:03	05/29/18 14:15	1
13C4-PFHpA	81		50 - 150				05/14/18 14:03	05/29/18 14:15	1
13C4 PFOA	88		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:15	1

1303-2503	00	30 - 130	05/14/16 14.03	05/29/10 14.15	1
13C4-PFHpA	81	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C4 PFOA	88	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C5 PFNA	88	50 - 150	05/14/18 14:03	05/29/18 14:15	1
1802 PFHxS	70	50 - 150	05/14/18 14:03	05/29/18 14:15	1
13C4 PFOS	72	50 - 150	05/14/18 14:03	05/29/18 14:15	1

Client Sample ID: KLA05-SB2-01 Lab Sample ID: 320-39023-35

 Date Collected: 05/05/18 09:30
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 85.2

Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.45	0.36	0.092	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	1
Perfluorooctanoic acid (PFOA)	1.6	0.36	0.12	ug/Kg	₩	05/14/18 14:03	05/29/18 09:56	1
Perfluorononanoic acid (PFNA)	0.36	0.36	0.096	ug/Kg	₽	05/14/18 14:03	05/29/18 09:56	1
Perfluorobutanesulfonic acid (PFBS)	0.32 J	0.47	0.070	ug/Kg	☼	05/14/18 14:03	05/29/18 09:56	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sam	ple ID:	KLA05-9	SB2-01
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Lab Sample ID: 320-39023-35 Date Collected: 05/05/18 09:30 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 85.2

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	20		0.36	0.073	ug/Kg	<del></del>	05/14/18 14:03	05/29/18 09:56	1
Perfluorooctanesulfonic acid (PFOS)	37	E	1.2	0.28	ug/Kg	☼	05/14/18 14:03	05/29/18 09:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	69		50 - 150				05/14/18 14:03	05/29/18 09:56	1
13C4-PFHpA	85		50 - 150				05/14/18 14:03	05/29/18 09:56	1
13C4 PFOA	92		50 - 150				05/14/18 14:03	05/29/18 09:56	1
13C5 PFNA	89		50 - 150				05/14/18 14:03	05/29/18 09:56	1
1802 PFHxS	71		50 - 150				05/14/18 14:03	05/29/18 09:56	1
13C4 PFOS	73		50 - 150				05/14/18 14:03	05/29/18 09:56	1
Method: EPA 537 (Mod) - PFA	S for OSM	5 1 Table I	B-15 - DI						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	2.4	U	3.6	0.92	ug/Kg	₩	05/14/18 14:03	05/29/18 14:46	10
Perfluorooctanoic acid (PFOA)	1.8	J D	3.6	1.2	ug/Kg	☼	05/14/18 14:03	05/29/18 14:46	10
Perfluorononanoic acid (PFNA)	2.4	U M	3.6	0.96	ug/Kg	☼	05/14/18 14:03	05/29/18 14:46	10
Perfluorobutanesulfonic acid (PFBS)	2.1	U	4.7	0.70	ug/Kg		05/14/18 14:03	05/29/18 14:46	10
Perfluorohexanesulfonic acid (PFHxS)	20	D	3.6	0.73	ug/Kg	₽	05/14/18 14:03	05/29/18 14:46	10
Perfluorooctanesulfonic acid (PFOS)	40	D	12	2.8	ug/Kg	₩	05/14/18 14:03	05/29/18 14:46	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	59		50 - 150				05/14/18 14:03	05/29/18 14:46	10
13C4-PFHpA	82		50 - 150				05/14/18 14:03	05/29/18 14:46	10
13C4 PFOA	86		50 - 150				05/14/18 14:03	05/29/18 14:46	10
13C5 PFNA	89		50 - 150				05/14/18 14:03	05/29/18 14:46	10
1802 PFHxS	70		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:46	10
13C4 PFOS	69		50 <sub>-</sub> 150				05/14/10 14:00	05/29/18 14:46	10

Client Sample ID: KLA05-SB2-02

Date Collected: 05/05/18 09:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 75.4

Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.38	J	0.40	0.10	ug/Kg	<del></del>	05/14/18 14:03	05/29/18 10:04	1
Perfluorooctanoic acid (PFOA)	1.2		0.40	0.13	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Perfluorononanoic acid (PFNA)	0.34	J M	0.40	0.11	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Perfluorobutanesulfonic acid (PFBS)	0.29	J	0.53	0.078	ug/Kg	₽	05/14/18 14:03	05/29/18 10:04	1
Perfluorohexanesulfonic acid (PFHxS)	8.9		0.40	0.082	ug/Kg	₽	05/14/18 14:03	05/29/18 10:04	1
Perfluorooctanesulfonic acid (PFOS)	40	E	1.3	0.32	ug/Kg	☼	05/14/18 14:03	05/29/18 10:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C4-PFHpA	74		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C4 PFOA	85		50 - 150				05/14/18 14:03	05/29/18 10:04	1
13C5 PFNA	87		50 - 150				05/14/18 14:03	05/29/18 10:04	1
1802 PFHxS	74		50 - 150				05/14/18 14:03	05/29/18 10:04	1

TestAmerica Sacramento

Lab Sample ID: 320-39023-36

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB2-02

Lab Sample ID: 320-39023-36 Date Collected: 05/05/18 09:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 75.4

Isotope Dilution	%Recovery	5.1, Table Qualifier	Limits	,			Prepared	Analyzed	Dil Fa
13C4 PFOS	72		50 - 150				05/14/18 14:03	05/29/18 10:04	
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1. Table	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	2.7	U	4.0	1.0	ug/Kg	<del>\</del>	05/14/18 14:03	05/29/18 14:54	1
Perfluorooctanoic acid (PFOA)	1.3	J D	4.0	1.3	ug/Kg	₽	05/14/18 14:03	05/29/18 14:54	1
Perfluorononanoic acid (PFNA)	2.7	U	4.0	1.1	ug/Kg	₽	05/14/18 14:03	05/29/18 14:54	1
Perfluorobutanesulfonic acid (PFBS)	2.4	U	5.3	0.78	ug/Kg		05/14/18 14:03	05/29/18 14:54	1
Perfluorohexanesulfonic acid (PFHxS)	9.7	D	4.0	0.82	ug/Kg	☼	05/14/18 14:03	05/29/18 14:54	1
Perfluorooctanesulfonic acid (PFOS)	42	D M	13	3.2	ug/Kg	☼	05/14/18 14:03	05/29/18 14:54	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	72	-	50 - 150				05/14/18 14:03	05/29/18 14:54	1
13C4-PFHpA	77		50 - 150				05/14/18 14:03	05/29/18 14:54	1
13C4 PFOA	92		50 - 150				05/14/18 14:03	05/29/18 14:54	1
13C5 PFNA	85		50 - 150				05/14/18 14:03	05/29/18 14:54	1
1802 PFHxS	72		50 - 150				05/14/18 14:03	05/29/18 14:54	1
13C4 PFOS	70		50 <sub>-</sub> 150				05/14/18 14:03	05/29/18 14:54	1
Pate Collected: 05/05/18 10:10								Darsont Calid	10. 02
pate Received: 05/09/18 09:20								Percent Solid	ls: 83.
Method: EPA 537 (Mod) - PFA					Unit	n			
Method: EPA 537 (Mod) - PFA Analyte	Result	5.1, Table Qualifier	LOQ		Unit	D_	Prepared	Analyzed	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	Result 14	Qualifier	<b>LOQ</b>	0.092	ug/Kg		Prepared 05/14/18 14:03	Analyzed 05/29/18 10:20	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	Result 14 57	Qualifier E	0.36 0.36	0.092 0.12	ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 10:20 05/29/18 10:20	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	Result 14	Qualifier E	<b>LOQ</b>	0.092 0.12 0.096	ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 10:20	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	Result 14 57 2.6	Qualifier E M	0.36 0.36 0.36	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	Result 14 57 2.6 6.7	Qualifier  E M	0.36 0.36 0.36 0.47	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	Result 14 57 2.6 6.7 430	E M E	0.36 0.36 0.36 0.47 0.36	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	Result 14 57 2.6 6.7 430 4600	E M E	0.36 0.36 0.36 0.47 0.36	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	Result  14  57  2.6  6.7  430  4600  %Recovery	E M E	0.36 0.36 0.36 0.47 0.36 1.2	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluoropetanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	Result 14 57 2.6 6.7 430 4600 %Recovery	E M E	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50-150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result 14 57 2.6 6.7 430 4600 %Recovery 122 66	Qualifier  E M  E  Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C5 PFNA 18O2 PFHxS	Result 14 57 2.6 6.7 430 4600  **Recovery 122 66 87	Qualifier  E M  E Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorobutanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result 14 57 2.6 6.7 430 4600  **Recovery 122 66 87 19	Qualifier  E M  E Qualifier  Qualifier	0.36 0.36 0.36 0.47 0.36 1.2  Limits 50 - 150 50 - 150 50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C5 PFNA 18O2 PFHxS	## Result  14  57  2.6  6.7  430  4600  ## Recovery  122  66  87  19  46  13	Qualifier  E M  E Qualifier  Q Q Q Q	LOQ  0.36  0.36  0.36  0.47  0.36  1.2  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.092 0.12 0.096 0.070 0.073	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  Analyzed  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFNS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA	## Result  14  57  2.6  6.7  430  4600  ## Recovery  122  66  87  19  46  13  ## S for QSM \$  ***	Qualifier  E M  E Qualifier  Q Q Q Q	LOQ  0.36  0.36  0.36  0.47  0.36  1.2  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg	# # # # # # # # # # # # # # # # # # #	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  Analyzed  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20  05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluoroctanesulfonic acid (PFHxS) Perfluorobexanesulfonic acid (PFDS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS	## Result    14   14   157   2.6   6.7   430   4600   ## Recovery   122   66   87   19   46   13   13   15   15   15   15   15   15	Qualifier  E M  E Qualifier  Q Q Q Q 5.1, Table	LOQ  0.36  0.36  0.36  0.47  0.36  1.2  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	* * * * *	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte	## Result    14   14   157   2.6   6.7   430   4600   ## Recovery   122   66   87   19   46   13   13   15   15   15   15   15   15	Qualifier  E M  E Qualifier  Q Q Q Q Q D D 1.1, Table Qualifier J D	LOQ  0.36  0.36  0.36  0.47  0.36  1.2  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  B-15 - DL  LOQ	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa  Dil Fa  10 10
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNA) Perfluorobutanesulfonic acid (PFNS) Perfluoroctanesulfonic acid (PFNS) Perfluorooctanesulfonic acid (PFNS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS 13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA)	Result  14  57  2.6  6.7  430  4600  **Recovery  122  66  87  19  46  13  S for QSM & Result  13	Qualifier  E M  E Qualifier  Q Q Q Q Q D D D	LOQ  0.36  0.36  0.36  0.47  0.36  1.2  Limits  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  50 - 150  B-15 - DL  LOQ  36	0.092 0.12 0.096 0.070 0.073 0.28	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20  Analyzed  05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20 05/29/18 10:20	Dil Fa

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB3-01 Lab Sample ID: 320-39023-37

 Date Collected: 05/05/18 10:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 83.8

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	650	D	36	7.3	ug/Kg	<del></del>	05/14/18 14:03	05/29/18 16:28	100
Perfluorooctanesulfonic acid (PFOS)	14000	E D	120	28	ug/Kg	₩	05/14/18 14:03	05/29/18 16:28	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	60	M	50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4-PFHpA	80		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4 PFOA	82		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C5 PFNA	68		50 - 150				05/14/18 14:03	05/29/18 16:28	100
1802 PFHxS	75		50 - 150				05/14/18 14:03	05/29/18 16:28	100
13C4 PFOS	53		50 - 150				05/14/18 14:03	05/29/18 16:28	100

Client Sample ID: KLA05-SB3-02 Lab Sample ID: 320-39023-38

 Date Collected: 05/05/18 10:20
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 80.4

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5		0.37	0.097	ug/Kg	₽	05/14/18 14:03	05/29/18 10:28	1
Perfluorooctanoic acid (PFOA)	3.8		0.37	0.12	ug/Kg	₽	05/14/18 14:03	05/29/18 10:28	1
Perfluorononanoic acid (PFNA)	0.25	J M	0.37	0.10	ug/Kg	₽	05/14/18 14:03	05/29/18 10:28	1
Perfluorobutanesulfonic acid (PFBS)	0.58		0.50	0.074	ug/Kg	\$	05/14/18 14:03	05/29/18 10:28	1
Perfluorohexanesulfonic acid (PFHxS)	15		0.37	0.077	ug/Kg	₩	05/14/18 14:03	05/29/18 10:28	1
Perfluorooctanesulfonic acid (PFOS)	560	E	1.2	0.30	ug/Kg	₽	05/14/18 14:03	05/29/18 10:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	73		50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C4-PFHpA	81		50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C4 PFOA	87		50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C5 PFNA	50		50 - 150				05/14/18 14:03	05/29/18 10:28	1
1802 PFHxS	73		50 - 150				05/14/18 14:03	05/29/18 10:28	1
13C4 PFOS	40	Q	50 - 150				05/14/18 14:03	05/29/18 10:28	1
Method: EPA 537 (Mod) - PFA						_			
Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	25		37		ug/Kg	<b>☆</b>		05/29/18 16:44	100
Perfluorooctanoic acid (PFOA)	25		37		ug/Kg	<b>☆</b>		05/29/18 16:44	100
Perfluorononanoic acid (PFNA)	25		37		ug/Kg			05/29/18 16:44	100
Perfluorobutanesulfonic acid (PFBS)	22		50		ug/Kg	<del>;</del> Q:		05/29/18 16:44	100
Perfluorohexanesulfonic acid (PFHxS)	13	JD	37	7.7	ug/Kg	₿		05/29/18 16:44	100
Perfluorooctanesulfonic acid (PFOS)	980	D	120	30	ug/Kg	₽	05/14/18 14:03	05/29/18 16:44	100
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	78	M	50 - 150				05/14/18 14:03	05/29/18 16:44	100
13C3-PFBS			50 - 150				05/14/18 14:03	05/29/18 16:44	100
13C3-PFBS 13C4-PFHpA	81								
	81 99		50 - 150				05/14/18 14:03	05/29/18 16:44	100
13C4-PFHpA			50 - 150 50 - 150					05/29/18 16:44 05/29/18 16:44	100

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA05-SB3-02

Lab Sample ID: 320-39023-38 Date Collected: 05/05/18 10:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 80.4

Met	thod: EPA	537 (Mod)	- PFAS for	QSM 5.1.	. Table B-15 -	DL (Continued)

Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 13C4 PFOS 70 50 - 150 05/14/18 14:03 05/29/18 16:44 100

Client Sample ID: KLA06-SB1-01

Lab Sample ID: 320-39023-39 Date Collected: 05/01/18 14:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 73.2

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.71		0.41	0.11	ug/Kg	₩	05/14/18 13:10	06/06/18 23:18	1
Perfluorooctanoic acid (PFOA)	1.3		0.41	0.14	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Perfluorononanoic acid (PFNA)	2.4		0.41	0.11	ug/Kg	☼	05/14/18 13:10	06/06/18 23:18	1
Perfluorobutanesulfonic acid (PFBS)	0.27	J	0.54	0.080	ug/Kg	₽	05/14/18 13:10	06/06/18 23:18	1
Perfluorohexanesulfonic acid (PFHxS)	11		0.41	0.084	ug/Kg	₿	05/14/18 13:10	06/06/18 23:18	1
Perfluorooctanesulfonic acid (PFOS)	190	ME	1.4	0.32	ug/Kg	₽	05/14/18 13:10	06/06/18 23:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	72		50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4-PFHpA	77		50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4 PFOA	79		50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C5 PFNA	62		50 - 150				05/14/18 13:10	06/06/18 23:18	1
1802 PFHxS	73		50 - 150				05/14/18 13:10	06/06/18 23:18	1
13C4 PFOS	62		50 - 150				05/14/18 13:10	06/06/18 23:18	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table	B-15 - DL						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.4	U	8.1	2.1	ug/Kg	<del>-</del>	05/14/18 13:10	05/29/18 11:30	20
Perfluorooctanoic acid (PFOA)	5.4	UM	8.1	2.7	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
Perfluorononanoic acid (PFNA)	2.5	J D	8.1	2.2	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
Perfluorobutanesulfonic acid (PFBS)	4.9	IJ	11	1.6	ug/Kg		05/14/18 13:10	05/29/18 11:30	20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	DII Fac
Perfluoroheptanoic acid (PFHpA)	5.4	U	8.1	2.1	ug/Kg	₩	05/14/18 13:10	05/29/18 11:30	20
Perfluorooctanoic acid (PFOA)	5.4	U M	8.1	2.7	ug/Kg	₽	05/14/18 13:10	05/29/18 11:30	20
Perfluorononanoic acid (PFNA)	2.5	J D	8.1	2.2	ug/Kg	₽	05/14/18 13:10	05/29/18 11:30	20
Perfluorobutanesulfonic acid (PFBS)	4.9	U	11	1.6	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
Perfluorohexanesulfonic acid (PFHxS)	11	D	8.1	1.7	ug/Kg	₩	05/14/18 13:10	05/29/18 11:30	20
Perfluorooctanesulfonic acid (PFOS)	250	D	27	6.5	ug/Kg	☼	05/14/18 13:10	05/29/18 11:30	20
	Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	Perfluoroheptanoic acid (PFHpA) 5.4 Perfluorooctanoic acid (PFOA) 5.4 Perfluorononanoic acid (PFNA) 2.5 Perfluorobutanesulfonic acid (PFBS) 4.9 Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid 250	Perfluoroheptanoic acid (PFHpA) 5.4 U Perfluorooctanoic acid (PFOA) 5.4 U M  Perfluorononanoic acid (PFNA) 2.5 J D  Perfluorobutanesulfonic acid (PFBS) 4.9 U  Perfluorohexanesulfonic acid 11 D  (PFHxS) Perfluorooctanesulfonic acid 250 D	Perfluoroheptanoic acid (PFHpA) 5.4 U 8.1 Perfluorooctanoic acid (PFOA) 5.4 U M 8.1  Perfluorononanoic acid (PFNA) 2.5 J D 8.1 Perfluorobutanesulfonic acid (PFBS) 4.9 U 11  Perfluorohexanesulfonic acid 11 D 8.1  (PFHxS) Perfluorooctanesulfonic acid 250 D 27	Perfluoroheptanoic acid (PFHpA) 5.4 U 8.1 2.1 Perfluorooctanoic acid (PFOA) 5.4 U M 8.1 2.7  Perfluorononanoic acid (PFNA) 2.5 J D 8.1 2.2  Perfluorobutanesulfonic acid (PFBS) 4.9 U 11 1.6  Perfluorohexanesulfonic acid 11 D 8.1 1.7  (PFHxS)  Perfluorooctanesulfonic acid 250 D 27 6.5	Perfluoroheptanoic acid (PFHpA) 5.4 U 8.1 2.1 ug/Kg Perfluorooctanoic acid (PFOA) 5.4 U M 8.1 2.7 ug/Kg  Perfluorononanoic acid (PFNA) 2.5 J D 8.1 2.2 ug/Kg  Perfluorobutanesulfonic acid (PFBS) 4.9 U 11 1.6 ug/Kg  Perfluorohexanesulfonic acid 11 D 8.1 1.7 ug/Kg  (PFHxS)  Perfluorooctanesulfonic acid 250 D 27 6.5 ug/Kg	Perfluoroheptanoic acid (PFHpA)         5.4         U         8.1         2.1         ug/Kg         ©           Perfluorooctanoic acid (PFOA)         5.4         U M         8.1         2.7         ug/Kg         ©           Perfluorononanoic acid (PFNA)         2.5         J D         8.1         2.2         ug/Kg         ©           Perfluorobutanesulfonic acid (PFBS)         4.9         U         11         1.6         ug/Kg         ©           Perfluorohexanesulfonic acid (PFHxS)         11         D         8.1         1.7         ug/Kg         ©           Perfluorooctanesulfonic acid         250         D         27         6.5         ug/Kg         ©	Perfluoroheptanoic acid (PFHpA)         5.4         U         8.1         2.1         ug/Kg         □ 05/14/18 13:10           Perfluorooctanoic acid (PFOA)         5.4         U M         8.1         2.7         ug/Kg         □ 05/14/18 13:10           Perfluorononanoic acid (PFNA)         2.5         J D         8.1         2.2         ug/Kg         □ 05/14/18 13:10           Perfluorobutanesulfonic acid (PFBS)         4.9         U         11         1.6         ug/Kg         □ 05/14/18 13:10           Perfluorohexanesulfonic acid         11         D         8.1         1.7         ug/Kg         □ 05/14/18 13:10           (PFHxS)           Perfluorooctanesulfonic acid         250         D         27         6.5         ug/Kg         □ 05/14/18 13:10	Perfluoroheptanoic acid (PFHpA)         5.4 U         8.1         2.1 ug/Kg         © 05/14/18 13:10         05/29/18 11:30           Perfluorooctanoic acid (PFOA)         5.4 U M         8.1         2.7 ug/Kg         © 05/14/18 13:10         05/29/18 11:30           Perfluorononanoic acid (PFNA)         2.5 J D         8.1         2.2 ug/Kg         © 05/14/18 13:10         05/29/18 11:30           Perfluorobutanesulfonic acid (PFBS)         4.9 U         11         1.6 ug/Kg         © 05/14/18 13:10         05/29/18 11:30           Perfluorohexanesulfonic acid (PFHxS)         8.1         1.7 ug/Kg         © 05/14/18 13:10         05/29/18 11:30           Perfluoroctanesulfonic acid         250 D         27         6.5 ug/Kg         © 05/14/18 13:10         05/29/18 11:30

%Recovery Qualifier Isotope Dilution Limits Prepared Analyzed Dil Fac 13C3-PFBS 67 50 - 150 05/14/18 13:10 05/29/18 11:30 20 76 50 - 150 13C4-PFHpA 05/14/18 13:10 05/29/18 11:30 20 13C4 PFOA 82 50 - 150 05/14/18 13:10 05/29/18 11:30 20 79 50 - 150 20 13C5 PFNA 05/14/18 13:10 05/29/18 11:30 1802 PFHxS 71 50 - 150 05/14/18 13:10 05/29/18 11:30 20 13C4 PFOS 68 50 - 150 05/14/18 13:10 05/29/18 11:30 20

Client Sample ID: KLA06-SB1-02

Date Collected: 05/01/18 14:20 Matrix: Solid Date Received: 05/09/18 09:20 Percent Solids: 79.6

Method: EPA 537 (Mod) - PFA	S for QSM 5.1, Table B	-15					
Analyte	Result Qualifier	LOQ	DL Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.25 J	0.37	0.097 ug/Kg	☆	05/14/18 13:10	06/06/18 23:26	1
Perfluorooctanoic acid (PFOA)	1.1	0.37	0.12 ug/Kg	₽	05/14/18 13:10	06/06/18 23:26	1

Lab Sample ID: 320-39023-40

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB1-02 Lab Sample ID: 320-39023-40

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	1.4		0.37	0.10	ug/Kg	₩	05/14/18 13:10	06/06/18 23:26	
Perfluorobutanesulfonic acid (PFBS)	0.19	J	0.50	0.073	ug/Kg	☼	05/14/18 13:10	06/06/18 23:26	1
Perfluorohexanesulfonic acid (PFHxS)	6.8		0.37	0.077	ug/Kg	₩	05/14/18 13:10	06/06/18 23:26	1
Perfluorooctanesulfonic acid (PFOS)	100	ME	1.2	0.30	ug/Kg	₽	05/14/18 13:10	06/06/18 23:26	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4-PFHpA	81		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4 PFOA	76		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C5 PFNA	70		50 - 150				05/14/18 13:10	06/06/18 23:26	1
1802 PFHxS	72		50 - 150				05/14/18 13:10	06/06/18 23:26	1
13C4 PFOS	68		50 - 150				05/14/18 13:10	06/06/18 23:26	1
Method: EPA 537 (Mod) - PEA	S for OSM	5 1 Table I	B-15 - DI						
Method: EPA 537 (Mod) - PFA Analyte	Result	Qualifier	B-15 - DL LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Perfluoroheptanoic acid (PFHpA)	Result 5.0	Qualifier U M		1.9	ug/Kg	D <u>☆</u>	05/14/18 13:10	05/29/18 11:38	20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	Result	Qualifier U M	LOQ	1.9			05/14/18 13:10	-	20
Analyte Perfluoroheptanoic acid (PFHpA)	5.0 5.0	Qualifier U M		1.9 2.5 2.0	ug/Kg ug/Kg ug/Kg	<del></del>	05/14/18 13:10	05/29/18 11:38 05/29/18 11:38	20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	5.0 5.0 5.0 5.0	Qualifier U M U	10Q 7.4 7.4	1.9 2.5 2.0	ug/Kg ug/Kg	<del></del>	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38	20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	Result 5.0 5.0 5.0 4.5	Qualifier U M U U M	7.4 7.4 7.4	1.9 2.5 2.0 1.5	ug/Kg ug/Kg ug/Kg	ф \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	Result 5.0 5.0 5.0 4.5	Qualifier U M U U M U M U M J D	7.4 7.4 7.4 7.4 9.9	1.9 2.5 2.0 1.5	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	5.0 5.0 5.0 4.5 <b>6.6</b>	Qualifier U M U U M U M D D	7.4 7.4 7.4 9.9 7.4	1.9 2.5 2.0 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	5.0 5.0 5.0 4.5 6.6	Qualifier U M U U M U M D D	7.4 7.4 7.4 9.9 7.4	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	\$5.0 \$5.0 \$5.0 \$4.5 \$6.6 \$120 \$%Recovery	Qualifier U M U U M U M D D	7.4 7.4 7.4 9.9 7.4 25  Limits	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	\$5.0 \$5.0 \$5.0 \$4.5 \$6.6 \$120 \$%Recovery \$69\$	Qualifier U M U U M U M D D	7.4 7.4 9.9 7.4 25  Limits 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	8esult 5.0 5.0 5.0 4.5 6.6 120 %Recovery 69 76	Qualifier U M U U M U M D D	7.4 7.4 9.9 7.4 25  Limits 50 - 150 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution  13C3-PFBS 13C4-PFHpA 13C4 PFOA	Result	Qualifier U M U U M U M D D	LOQ 7.4 7.4 9.9 7.4 25  Limits 50 - 150 50 - 150	1.9 2.5 2.0 1.5 1.5	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	*	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38 Analyzed 05/29/18 11:38 05/29/18 11:38 05/29/18 11:38	20 20 20 20 20 20 20

Client Sample ID: KLA06-SB2-01 Lab Sample ID: 320-39023-41

Date Collected: 05/01/18 13:45 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 63.5

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	J1	0.48	0.12	ug/Kg	₩	05/14/18 13:10	06/06/18 23:34	1
Perfluorooctanoic acid (PFOA)	6.7	J1	0.48	0.16	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorononanoic acid (PFNA)	1.6		0.48	0.13	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorobutanesulfonic acid (PFBS)	0.99		0.64	0.094	ug/Kg	<b>\$</b>	05/14/18 13:10	06/06/18 23:34	1
Perfluorohexanesulfonic acid (PFHxS)	42	E J1	0.48	0.099	ug/Kg	₽	05/14/18 13:10	06/06/18 23:34	1
Perfluorooctanesulfonic acid (PFOS)	580	E J1	1.6	0.38	ug/Kg	₩	05/14/18 13:10	06/06/18 23:34	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	82		50 - 150				05/14/18 13:10	06/06/18 23:34	1
13C4-PFHpA	82		50 - 150				05/14/18 13:10	06/06/18 23:34	1

TestAmerica Sacramento

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB2-01

Lab Sample ID: 320-39023-41 Date Collected: 05/01/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 63.5

Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C4 PFOA	84		50 - 150				05/14/18 13:10	06/06/18 23:34	
13C5 PFNA	54		50 - 150				05/14/18 13:10	06/06/18 23:34	
1802 PFHxS	75		50 - 150				05/14/18 13:10	06/06/18 23:34	
13C4 PFOS	54		50 - 150				05/14/18 13:10	06/06/18 23:34	
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table E	3-15 - DL LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)		J D J1	4.8	1.2	ug/Kg	<del></del>	•	05/29/18 12:49	1
Perfluorooctanoic acid (PFOA)		D J1	4.8	1.6	ug/Kg	₽		05/29/18 12:49	1
Perfluorononanoic acid (PFNA)		J D	4.8		ug/Kg	☼		05/29/18 12:49	1
Perfluorobutanesulfonic acid		J D J1	6.4		ug/Kg	\$		05/29/18 12:49	1
(PFBS) Perfluorohexanesulfonic acid (PFHxS)	44	D J1	4.8	0.99	ug/Kg	₩	05/14/18 13:10	05/29/18 12:49	10
Perfluorooctanesulfonic acid (PFOS)	860	EDMJ1	16	3.8	ug/Kg	₽	05/14/18 13:10	05/29/18 12:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	67		50 - 150				05/14/18 13:10	05/29/18 12:49	1
13C4-PFHpA	80		50 - 150				05/14/18 13:10	05/29/18 12:49	1
13C4 PFOA	85		50 - 150				05/14/18 13:10	05/29/18 12:49	1
13C5 PFNA	77		50 - 150				05/14/18 13:10	05/29/18 12:49	1
1802 PFHxS	74		50 - 150				05/14/18 13:10	05/29/18 12:49	1
13C4 PFOS	64		50 - 150				05/14/18 13:10	05/29/18 12:49	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table I	3-15 - DL2						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	32	U	48	12	ug/Kg	☼	05/14/18 13:10	05/29/18 12:02	100
Perfluorooctanoic acid (PFOA)	32	U	48	16	ug/Kg	☼	05/14/18 13:10	05/29/18 12:02	10
Perfluorononanoic acid (PFNA)	32	U	48	13	ug/Kg	₩	05/14/18 13:10	05/29/18 12:02	10
Perfluorobutanesulfonic acid (PFBS)	29	U	64	9.4	ug/Kg		05/14/18 13:10	05/29/18 12:02	10
Perfluorohexanesulfonic acid (PFHxS)	39	J D J1	48	9.9	ug/Kg	₽	05/14/18 13:10	05/29/18 12:02	10
,	960	D M J1	160	38	ug/Kg	₽	05/14/18 13:10	05/29/18 12:02	10
Perfluorooctanesulfonic acid (PFOS)									
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
(PFOS)	%Recovery	Qualifier M	Limits 50 - 150					Analyzed 05/29/18 12:02	
(PFOS) Isotope Dilution 13C3-PFBS	%Recovery	-					05/14/18 13:10		10
(PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	%Recovery	-	50 - 150				05/14/18 13:10 05/14/18 13:10	05/29/18 12:02	10
(PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	<b>%Recovery</b> 68 66	-	50 - 150 50 - 150				05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:02 05/29/18 12:02	10 10 10
(PFOS) Isotope Dilution	<b>%Recovery</b> 68 66 81	-	50 - 150 50 - 150 50 - 150				05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:02 05/29/18 12:02 05/29/18 12:02	100 100 100 100

Client Sample ID: KLA06-SB2-02 Lab Sample ID: 320-39023-42

Date Collected: 05/01/18 13:50 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 70.3

Method: EPA 537 (Mod) - PFAS	for QSM 5.1, Table B	-15						
Analyte	Result Qualifier	LOQ	DL I	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.6	0.43	0.11 ι	ug/Kg	₩	05/14/18 13:10	06/07/18 00:13	1
Perfluorooctanoic acid (PFOA)	6.4	0.43	0.14 ι	ug/Kg	☼	05/14/18 13:10	06/07/18 00:13	1
Perfluorononanoic acid (PFNA)	1.7	0.43	0.12 ι	ug/Kg	₩	05/14/18 13:10	06/07/18 00:13	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB2-02 Lab Sample ID: 320-39023-4
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 Date Collected: 05/01/18 13:50
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 70.3

Method: EPA 537 (Mod) - PFA Analyte		Qualifier	LOQ	,	Unit	D	Prepared	Analyzed	Dil Fa
Perfluorobutanesulfonic acid	2.1		0.57	0.084	ug/Kg	<del></del>	05/14/18 13:10	06/07/18 00:13	
PFBS) Perfluorohexanesulfonic acid	40	Ē	0.43	0.089	ug/Kg		05/14/18 13:10	06/07/18 00:13	
PFHxS) Perfluorooctanesulfonic acid PFOS)	920	E	1.4	0.34	ug/Kg	₽	05/14/18 13:10	06/07/18 00:13	
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	81		50 - 150				05/14/18 13:10	06/07/18 00:13	-
13C4-PFHpA	83		50 - 150				05/14/18 13:10	06/07/18 00:13	
3C4 PFOA	83		50 <sub>-</sub> 150				05/14/18 13:10	06/07/18 00:13	
3C5 PFNA	44	Q	50 - 150				05/14/18 13:10	06/07/18 00:13	
1802 PFHxS	75	•	50 - 150					06/07/18 00:13	
3C4 PFOS		Q	50 - 150					06/07/18 00:13	
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1. Table I	B-15 - DL						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	1.8	JD	4.3	1.1	ug/Kg	₩	05/14/18 13:10	05/29/18 13:28	-
Perfluorooctanoic acid (PFOA)	6.2	D	4.3	1.4	ug/Kg	₽	05/14/18 13:10	05/29/18 13:28	
Perfluorononanoic acid (PFNA)	1.8	J D	4.3	1.2	ug/Kg	₩	05/14/18 13:10	05/29/18 13:28	
Perfluorobutanesulfonic acid	2.1	JD	5.7	0.84	ug/Kg	<b>\$</b>	05/14/18 13:10	05/29/18 13:28	
Perfluorohexanesulfonic acid PFHxS)	45	D	4.3	0.89	ug/Kg	₽	05/14/18 13:10	05/29/18 13:28	
Perfluorooctanesulfonic acid PFOS)	1300	E D	14	3.4	ug/Kg	₽	05/14/18 13:10	05/29/18 13:28	
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
13C3-PFBS	73		50 - 150				05/14/18 13:10	05/29/18 13:28	
3C4-PFHpA	78		50 - 150				05/14/18 13:10	05/29/18 13:28	
3C4 PFOA	90		50 - 150				05/14/18 13:10	05/29/18 13:28	
3C5 PFNA	75		50 - 150				05/14/18 13:10	05/29/18 13:28	
1802 PFHxS	72		50 <sub>-</sub> 150					05/29/18 13:28	
13C4 PFOS	61		50 - 150					05/29/18 13:28	
Method: EPA 537 (Mod) - PFA	S for QSM !	5.1. Table I	B-15 - DL2						
Analyte		Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil F
Perfluoroheptanoic acid (PFHpA)	29	U	43	11	ug/Kg	<u> </u>	05/14/18 13:10	05/29/18 12:25	1
Perfluorooctanoic acid (PFOA)	29	U M	43	14	ug/Kg	₩	05/14/18 13:10	05/29/18 12:25	1
Perfluorononanoic acid (PFNA)	29	U	43	12	ug/Kg	☼	05/14/18 13:10	05/29/18 12:25	1
Perfluorobutanesulfonic acid (PFBS)	26	U	57	8.4	ug/Kg		05/14/18 13:10	05/29/18 12:25	1
Perfluorohexanesulfonic acid	42	J D	43		ug/Kg	₽	05/14/18 13:10	05/29/18 12:25	1
Perfluorooctanesulfonic acid	1600	D	140	34	ug/Kg	₩	05/14/18 13:10	05/29/18 12:25	1
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
3C3-PFBS	61	M	50 - 150				05/14/18 13:10	05/29/18 12:25	1
	72		50 - 150				05/14/18 13:10	05/29/18 12:25	1
3C4-PFHpA			50 - 150					05/29/18 12:25	1
·	78		00 - 100						
13C4 PFOA							05/14/18 13:10	05/29/18 12:25	1
13C4-PFHpA 13C4 PFOA 13C5 PFNA 18O2 PFHxS	78 78 64		50 - 150 50 - 150					05/29/18 12:25 05/29/18 12:25	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA07-SD1-01 Lab Sample ID: 320-39023-43

 Date Collected: 05/06/18 11:30
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 92.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.22	U	0.32	0.084	ug/Kg	₽	05/14/18 13:10	06/07/18 00:52	1
Perfluorooctanoic acid (PFOA)	0.22	U	0.32	0.11	ug/Kg	☼	05/14/18 13:10	06/07/18 00:52	1
Perfluorononanoic acid (PFNA)	0.22	U	0.32	0.088	ug/Kg	☼	05/14/18 13:10	06/07/18 00:52	1
Perfluorobutanesulfonic acid (PFBS)	0.19	U	0.43	0.064	ug/Kg	₽	05/14/18 13:10	06/07/18 00:52	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	U	0.32	0.067	ug/Kg	☼	05/14/18 13:10	06/07/18 00:52	1
Perfluorooctanesulfonic acid	1.5		1.1	0.26	ug/Kg	₩	05/14/18 13:10	06/07/18 00:52	1
(PFOS) Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	68		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4-PFHpA	80		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C5 PFNA	82		50 - 150				05/14/18 13:10	06/07/18 00:52	1
1802 PFHxS	73		50 - 150				05/14/18 13:10	06/07/18 00:52	1
13C4 PFOS	75		50 <sub>-</sub> 150				05/44/40 42:40	06/07/18 00:52	1

Client Sample ID: ER-01

Date Collected: 05/01/18 15:30

Lab Sample ID: 320-39023-44

Matrix: Water

Date Received: 05/09/18 09:20

13C4 PFOS

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.88	J	1.7	0.51	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorooctanoic acid (PFOA)	1.7		1.7	0.46	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorononanoic acid (PFNA)	1.3	U	1.7	0.44	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorobutanesulfonic acid (PFBS)	0.40	J M	1.7	0.39	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorohexanesulfonic acid (PFHxS)	1.9		1.7	0.32	ng/L		05/15/18 12:48	05/21/18 14:03	1
Perfluorooctanesulfonic acid (PFOS)	8.7		3.4	0.93	ng/L		05/15/18 12:48	05/21/18 14:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C4-PFHpA	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C4 PFOA	90		50 - 150				05/15/18 12:48	05/21/18 14:03	1
13C5 PFNA	92		50 - 150				05/15/18 12:48	05/21/18 14:03	1
18O2 PFHxS	88		50 - 150				05/15/18 12:48	05/21/18 14:03	1

Client Sample ID: FB-01 Lab Sample ID: 320-39023-45

50 - 150

Date Received: 05/09/18 09:20

Date Collected: 05/01/18 15:50

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.2	U	1.7	0.51	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorooctanoic acid (PFOA)	1.2	U	1.7	0.45	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorononanoic acid (PFNA)	1.2	U	1.7	0.43	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorobutanesulfonic acid (PFBS)	0.83	U	1.7	0.38	ng/L		05/15/18 12:48	05/19/18 06:46	1
Perfluorohexanesulfonic acid	0.61	J	1.7	0.32	ng/L		05/15/18 12:48	05/19/18 06:46	1

TestAmerica Sacramento

**Matrix: Water** 

05/15/18 12:48 05/21/18 14:03

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: FB-01 Lab Sample ID: 320-39023-45

Date Collected: 05/01/18 15:50 Matrix: Water Date Received: 05/09/18 09:20

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	1.7	J	3.3	0.91	ng/L		05/15/18 12:48	05/19/18 06:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	91		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C4-PFHpA	101		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C4 PFOA	94		50 - 150				05/15/18 12:48	05/19/18 06:46	1
13C5 PFNA	105		50 - 150				05/15/18 12:48	05/19/18 06:46	1
1802 PFHxS	93		50 <sub>-</sub> 150				05/15/18 12:48	05/19/18 06:46	1
13C4 PFOS	95		50 - 150				05/15/18 12:48	05/19/18 06:46	1

Client Sample ID: ER-02 Lab Sample ID: 320-39023-46

Date Collected: 05/02/18 09:40 Matrix: Water Date Received: 05/09/18 09:20

Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table I	B-15						
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.3	U	1.7	0.53	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorooctanoic acid (PFOA)	0.52	J M	1.7	0.47	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorononanoic acid (PFNA)	1.3	U	1.7	0.45	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorobutanesulfonic acid (PFBS)	0.87	U	1.7	0.40	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	J	1.7	0.33	ng/L		05/16/18 14:51	05/28/18 09:29	1
Perfluorooctanesulfonic acid (PFOS)	4.4	М	3.5	0.96	ng/L		05/16/18 14:51	05/28/18 09:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4-PFHpA	71		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4 PFOA	80		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C5 PFNA	84		50 - 150				05/16/18 14:51	05/28/18 09:29	1
1802 PFHxS	75		50 - 150				05/16/18 14:51	05/28/18 09:29	1
13C4 PFOS	77		50 - 150				05/16/18 14:51	05/28/18 09:29	1

Client Sample ID: ER-03

Date Collected: 05/03/18 10:30

Lab Sample ID: 320-39023-47

Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.3	U	1.8	0.55	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorooctanoic acid (PFOA)	1.3	U	1.8	0.49	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorononanoic acid (PFNA)	1.3	U	1.8	0.47	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorobutanesulfonic acid (PFBS)	0.90	U	1.8	0.41	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorohexanesulfonic acid (PFHxS)	0.90	U	1.8	0.34	ng/L		05/17/18 14:42	05/25/18 23:59	1
Perfluorooctanesulfonic acid (PFOS)	2.7	U	3.6	0.99	ng/L		05/17/18 14:42	05/25/18 23:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	65	-	50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C4-PFHpA	66		50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C4 PFOA	69		50 - 150				05/17/18 14:42	05/25/18 23:59	1
13C5 PFNA	71		50 - 150				05/17/18 14:42	05/25/18 23:59	1
1802 PFHxS	63		50 - 150				05/17/18 14:42	05/25/18 23:59	1

TestAmerica Sacramento

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: ER-03 Lab Sample ID: 320-39023-47

Date Collected: 05/03/18 10:30 Date Received: 05/08/18 09:00

**Matrix: Water** 

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 13C4 PFOS 64 50 - 150 05/17/18 14:42 05/25/18 23:59

Client Sample ID: ER-04 Lab Sample ID: 320-39023-48 Date Collected: 05/04/18 11:00 **Matrix: Water** 

Date Received: 05/09/18 09:20

Perfluoroheptanoic acid (PFHpA)

Perfluorooctanoic acid (PFOA)

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	U	1.9	0.57	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorooctanoic acid (PFOA)	1.4	UM	1.9	0.50	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorononanoic acid (PFNA)	1.4	U	1.9	0.48	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorobutanesulfonic acid (PFBS)	0.93	U	1.9	0.43	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.46	J	1.9	0.35	ng/L		05/17/18 14:42	05/26/18 00:15	1
Perfluorooctanesulfonic acid (PFOS)	1.3	J	3.7	1.0	ng/L		05/17/18 14:42	05/26/18 00:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	70		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C4-PFHpA	70		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C4 PFOA	73		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C5 PFNA	78		50 - 150				05/17/18 14:42	05/26/18 00:15	1
18O2 PFHxS	69		50 - 150				05/17/18 14:42	05/26/18 00:15	1
13C4 PFOS	69		50 <sub>-</sub> 150				05/17/18 14:42	05/26/18 00:15	1

Client Sample ID: MW-572-02-PRL05-01D Lab Sample ID: 320-39023-49

Date Collected: 05/06/18 10:30 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	24		1.9	0.58	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorooctanoic acid (PFOA)	57		1.9	0.51	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorononanoic acid (PFNA)	3.9		1.9	0.50	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorobutanesulfonic acid (PFBS)	28		1.9	0.44	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorohexanesulfonic acid (PFHxS)	370	E	1.9	0.36	ng/L		05/18/18 10:26	05/28/18 12:37	1
Perfluorooctanesulfonic acid (PFOS)	1200	E	3.8	1.0	ng/L		05/18/18 10:26	05/28/18 12:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	59		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4-PFHpA	60		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4 PFOA	65		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C5 PFNA	61		50 - 150				05/18/18 10:26	05/28/18 12:37	1
1802 PFHxS	58		50 - 150				05/18/18 10:26	05/28/18 12:37	1
13C4 PFOS	55		50 - 150				05/18/18 10:26	05/28/18 12:37	1
Method: EPA 537 (Mod) - PFA	S for QSM 5	5.1. Table I	B-15 - DL						
Analyte		Qualifier	LOQ	DI	Unit	D	Prepared	Analyzed	Dil Fac

TestAmerica Sacramento

05/18/18 10:26 05/29/18 20:54

05/18/18 10:26 05/29/18 20:54

10

19

19

5.8 ng/L

5.1 ng/L

24 D

62 D

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Date Collected: 05/06/18 10:30 Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	14	UM	19	5.0	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorobutanesulfonic acid (PFBS)	28	D	19	4.4	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorohexanesulfonic acid (PFHxS)	390	D	19	3.6	ng/L		05/18/18 10:26	05/29/18 20:54	10
Perfluorooctanesulfonic acid (PFOS)	1200	D	38	10	ng/L		05/18/18 10:26	05/29/18 20:54	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	53		50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C4-PFHpA	56		50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C4 PFOA	63		50 - 150				05/18/18 10:26	05/29/18 20:54	10
13C5 PFNA	60		50 - 150				05/18/18 10:26	05/29/18 20:54	10
1802 PFHxS	52		50 - 150				05/18/18 10:26	05/29/18 20:54	10

Client Sample ID: KLA03-SB-2-01D Lab Sample ID: 320-39023-51

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.26	U	0.38	0.10	ug/Kg	₩	05/14/18 13:10	06/07/18 01:00	1
Perfluorooctanoic acid (PFOA)	0.16	J	0.38	0.13	ug/Kg	☼	05/14/18 13:10	06/07/18 01:00	1
Perfluorononanoic acid (PFNA)	0.26	U	0.38	0.10	ug/Kg	☼	05/14/18 13:10	06/07/18 01:00	1
Perfluorobutanesulfonic acid (PFBS)	0.098	J	0.51	0.076	ug/Kg	₽	05/14/18 13:10	06/07/18 01:00	1
Perfluorohexanesulfonic acid (PFHxS)	0.71		0.38	0.080	ug/Kg	₽	05/14/18 13:10	06/07/18 01:00	1
Perfluorooctanesulfonic acid (PFOS)	2.7		1.3	0.31	ug/Kg	☼	05/14/18 13:10	06/07/18 01:00	1
lsotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	79		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4-PFHpA	90		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4 PFOA	89		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C5 PFNA	93		50 - 150				05/14/18 13:10	06/07/18 01:00	1
18O2 PFHxS	84		50 - 150				05/14/18 13:10	06/07/18 01:00	1
13C4 PFOS	82		50 <sub>-</sub> 150				05/14/18 13:10	06/07/18 01:00	1

Client Sample ID: KLA06-SB-2-02D Lab Sample ID: 320-39023-52

Date Collected: 05/01/18 13:50 Matrix: Solid
Date Received: 05/09/18 09:20 Percent Solids: 67.8

Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.0	0.44	0.12	ug/Kg	₩	05/14/18 13:10	06/07/18 00:21	1
Perfluorooctanoic acid (PFOA)	4.1	0.44	0.15	ug/Kg	₩	05/14/18 13:10	06/07/18 00:21	1
Perfluorononanoic acid (PFNA)	1.8	0.44	0.12	ug/Kg	☼	05/14/18 13:10	06/07/18 00:21	1
Perfluorobutanesulfonic acid (PFBS)	1.4	0.59	0.087	ug/Kg	₽	05/14/18 13:10	06/07/18 00:21	1
Perfluorohexanesulfonic acid (PFHxS)	41 E	0.44	0.091	ug/Kg	₩	05/14/18 13:10	06/07/18 00:21	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB-2-02D	Lab Sample I
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ID: 320-39023-52 Date Collected: 05/01/18 13:50 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 67.8

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fa
Perfluorooctanesulfonic acid (PFOS)	690	E	1.5	0.35	ug/Kg	<del></del>	05/14/18 13:10	06/07/18 00:21	
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	76		50 - 150				05/14/18 13:10	06/07/18 00:21	
13C4-PFHpA	86		50 - 150				05/14/18 13:10	06/07/18 00:21	
13C4 PFOA	83		50 - 150				05/14/18 13:10	06/07/18 00:21	
13C5 PFNA	47	Q	50 - 150				05/14/18 13:10	06/07/18 00:21	
1802 PFHxS	76		50 <sub>-</sub> 150				05/14/18 13:10	06/07/18 00:21	
13C4 PFOS	44	Q	50 - 150				05/14/18 13:10	06/07/18 00:21	
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table I	B-15 - DL						
Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	1.4	J D	4.4	1.2	ug/Kg	☼	05/14/18 13:10	05/29/18 13:36	1
Perfluorooctanoic acid (PFOA)	4.4	D	4.4	1.5	ug/Kg	₽	05/14/18 13:10	05/29/18 13:36	1
Perfluorononanoic acid (PFNA)	1.8	J D	4.4	1.2	ug/Kg	☼	05/14/18 13:10	05/29/18 13:36	1
Perfluorobutanesulfonic acid (PFBS)	1.3	JD	5.9	0.87	ug/Kg	₽	05/14/18 13:10	05/29/18 13:36	1
Perfluorohexanesulfonic acid (PFHxS)	45	D	4.4	0.91	ug/Kg	₩	05/14/18 13:10	05/29/18 13:36	1
Perfluorooctanesulfonic acid (PFOS)	1000	ED	15	3.5	ug/Kg	₩	05/14/18 13:10	05/29/18 13:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
13C3-PFBS	66		50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C4-PFHpA	75		50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C4 PFOA	84		50 - 150				05/14/18 13:10	05/29/18 13:36	1
13C5 PFNA	79		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 13:36	1
1802 PFHxS	71		50 <sub>-</sub> 150				05/14/18 13:10	05/29/18 13:36	1
13C4 PFOS	62		50 - 150				05/14/18 13:10	05/29/18 13:36	1
Method: EPA 537 (Mod) - PFA	S for QSM	5.1, Table I	B-15 - DL2						
Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fa
Perfluoroheptanoic acid (PFHpA)	29		44		ug/Kg	☼	05/14/18 13:10		10
D (1 : :1/DEOA)	20	U M		4 -	ug/Kg	≎	05/14/18 13:10		10
Perfluorooctanoic acid (PFOA)	25	O IVI	44	15	- 5 5				
Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA)	29		44 44		ug/Kg	₩	05/14/18 13:10	05/29/18 12:33	10
		U		12			05/14/18 13:10 05/14/18 13:10		
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	29	U	44	12 8.7	ug/Kg	\$ \$		05/29/18 12:33	10
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	29	U U D	44 59	8.7 9.1	ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10	05/29/18 12:33 05/29/18 12:33	10
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	29 27 46 1100	U U D	44 59 44 150	8.7 9.1	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33	10 10
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	29 27 46 1100 %Recovery	U U D C Qualifier	44 59 44 150 <b>Limits</b>	8.7 9.1	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 <i>Prepared</i>	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 <i>Analyzed</i>	10 10 10 <b>Dil Fa</b>
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	29 27 46 1100 %Recovery	U U D C Qualifier	44 59 44 150  Limits 50 - 150	8.7 9.1	ug/Kg ug/Kg ug/Kg	\$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 <b>Prepared</b> 05/14/18 13:10	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 <i>Analyzed</i> 05/29/18 12:33	10 10 10 <b>Dil Fa</b>
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	29 27 46 1100 %Recovery 51 64	U U D C Qualifier	44 59 44 150  Limits 50 - 150 50 - 150	8.7 9.1	ug/Kg ug/Kg ug/Kg	\$ \$ \$	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 05/29/18 12:33	10 10 10 <b>Dil Fa</b>
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	29 27 46 1100 %Recovery 51 64 84	U U D C Qualifier	44 59 44 150 <b>Limits</b> 50 - 150 50 - 150 50 - 150	8.7 9.1	ug/Kg ug/Kg ug/Kg	* * *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 Prepared 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 <b>Analyzed</b> 05/29/18 12:33 05/29/18 12:33 05/29/18 12:33	10 10 10 <b>Dil Fa</b>
Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	29 27 46 1100 %Recovery 51 64	U U D C Qualifier	44 59 44 150  Limits 50 - 150 50 - 150	8.7 9.1	ug/Kg ug/Kg ug/Kg	* *	05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 <b>Prepared</b> 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10 05/14/18 13:10	05/29/18 12:33 05/29/18 12:33 05/29/18 12:33 <b>Analyzed</b> 05/29/18 12:33 05/29/18 12:33	10 10 10 10 10 <b>Dil Fa</b> 10 10 10

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB2-02D Lab Sample ID: 320-39023-53

 Date Collected: 05/04/18 13:25
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 59.1

Analyte		Qualifier	LOQ		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.6		0.50	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 10:36	1
Perfluorooctanoic acid (PFOA)	15		0.50	0.17	ug/Kg	☼	05/14/18 14:03	05/29/18 10:36	1
Perfluorononanoic acid (PFNA)	0.34	J M	0.50	0.14	ug/Kg	☼	05/14/18 14:03	05/29/18 10:36	1
Perfluorobutanesulfonic acid (PFBS)	24		0.67	0.099	ug/Kg	<b>\$</b>	05/14/18 14:03	05/29/18 10:36	1
Perfluorohexanesulfonic acid (PFHxS)	95	E	0.50	0.10	ug/Kg	☼	05/14/18 14:03	05/29/18 10:36	1
Perfluorooctanesulfonic acid (PFOS)	380	E	1.7	0.40	ug/Kg	₽	05/14/18 14:03	05/29/18 10:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	78	-	50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C4-PFHpA	78		50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C4 PFOA	84		50 - 150				05/14/18 14:03	05/29/18 10:36	1
13C5 PFNA	71		50 - 150				05/14/18 14:03	05/29/18 10:36	1
18O2 PFHxS	73		50 - 150				05/14/18 14:03	05/29/18 10:36	1
· · · · · · · · ·									
13C4 PFOS	60 S for QSM !	5 1 Table I	50 - 150 B-15 - DI				05/14/18 14:03	05/29/18 10:36	1
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	Qualifier	B-15 - DL LOQ		Unit	D	Prepared	Analyzed	Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA	S for QSM ! Result	•	B-15 - DL		Unit ug/Kg	<b>D</b>	Prepared 05/14/18 14:03	Analyzed 05/29/18 17:38	Dil Fac
13C4 PFOS Method: EPA 537 (Mod) - PFA Analyte	S for QSM ! Result	Qualifier J D	B-15 - DL LOQ	2.6			Prepared	Analyzed 05/29/18 17:38	<b>Dil Fac</b> 20 20
13C4 PFOS  Method: EPA 537 (Mod) - PFA Analyte  Perfluoroheptanoic acid (PFHpA)	S for QSM ! Result 5.5	Qualifier J D	B-15 - DL LOQ 10	2.6 3.3	ug/Kg	<del></del>	Prepared 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38	20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA)	S for QSM ! Result 5.5	Qualifier J D D U M	B-15 - DL LOQ 10	2.6 3.3 2.7	ug/Kg ug/Kg	<del></del>	Prepared 05/14/18 14:03 05/14/18 14:03	Analyzed 05/29/18 17:38 05/29/18 17:38 05/29/18 17:38	20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid	S for QSM !  Result  5.5 14 6.7	Qualifier J D D U M	B-15 - DL LOQ 10 10 10 13	2.6 3.3 2.7 2.0	ug/Kg ug/Kg ug/Kg	<del>\$</del>	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid	S for QSM ( Result 5.5 14 6.7 23	Qualifier J D D U M D	B-15 - DL LOQ 10 10 10 10	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid	S for QSM 9  Result  5.5 14 6.7 23	Qualifier JDD DUM DD DD DD	B-15 - DL LOQ 10 10 10 13	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS)	S for QSM ( Result 5.5 14 6.7 23 110 490 %Recovery	Qualifier JDD DUM DD DD DD	B-15 - DL LOQ 10 10 10 13 10 33	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM ( Result 5.5 14 6.7 23 110 490 %Recovery	Qualifier  J D  D  U M  D  D  Qualifier	B-15 - DL LOQ 10 10 10 13 10 33	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	S for QSM 4 Result 5.5 14 6.7 23 110 490  **Recovery** 74	Qualifier  J D  D  U M  D  D  Qualifier	B-15 - DL LOQ 10 10 13 10 33 Limits 50 - 150	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  4nalyzed  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	S for QSM 4 Result 5.5 14 6.7 23 110 490 %Recovery 74 72	Qualifier  J D  D  U M  D  D  Qualifier	B-15 - DL LOQ 10 10 13 10 33 Limits 50 - 150 50 - 150	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03 05/14/18 14:03  Prepared  05/14/18 14:03 05/14/18 14:03 05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Method: EPA 537 (Mod) - PFA Analyte Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	S for QSM 4 Result 5.5 14 6.7 23 110 490  **Recovery 74 72 86	Qualifier  J D  D  U M  D  D  Qualifier	B-15 - DL LOQ 10 10 13 10 33 Limits 50 - 150 50 - 150 50 - 150	2.6 3.3 2.7 2.0 2.1	ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  Prepared  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03  05/14/18 14:03	Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38  Analyzed  05/29/18 17:38  05/29/18 17:38  05/29/18 17:38	20 20 20 20 20 20 20 20 20 20 20 20 20 2

Client Sample ID: KLA02-SB1-02D Lab Sample ID: 320-39023-54

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.9

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.11	J	0.39	0.10	ug/Kg	₩	05/14/18 14:03	05/29/18 10:43	1
Perfluorooctanoic acid (PFOA)	0.25	J M	0.39	0.13	ug/Kg	₩	05/14/18 14:03	05/29/18 10:43	1
Perfluorononanoic acid (PFNA)	0.26	U M	0.39	0.11	ug/Kg	₩	05/14/18 14:03	05/29/18 10:43	1
Perfluorobutanesulfonic acid (PFBS)	0.21	J	0.52	0.077	ug/Kg	\$	05/14/18 14:03	05/29/18 10:43	1
Perfluorohexanesulfonic acid (PFHxS)	1.7		0.39	0.081	ug/Kg	₽	05/14/18 14:03	05/29/18 10:43	1
Perfluorooctanesulfonic acid (PFOS)	12		1.3	0.31	ug/Kg	₽	05/14/18 14:03	05/29/18 10:43	1

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB1-02D Lab Sample ID: 320-39023-54

 Date Collected: 05/04/18 13:45
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 75.9

Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	73	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4-PFHpA	83	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4 PFOA	91	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C5 PFNA	96	50 - 150	05/14/18 14:03	05/29/18 10:43	1
18O2 PFHxS	81	50 - 150	05/14/18 14:03	05/29/18 10:43	1
13C4 PFOS	80	50 - 150	05/14/18 14:03	05/29/18 10:43	1

Client Sample ID: KLA05-SB1-01D Lab Sample ID: 320-39023-55

Date Received: 05/09/18 09:20								Percent Solid	s: 82.2
Method: EPA 537 (Mod) - PFA		5.1, Table I Qualifier	3-15 LOQ	DI	Unit		Drawarad	Analysed	Dil Fac
Analyte		Qualifier	0.37		ug/Kg	D <u>₩</u>	Prepared 05/14/18 13:10	Analyzed	Dii Fac
Perfluoroheptanoic acid (PFHpA)	1.8					₩			
Perfluorooctanoic acid (PFOA)	12		0.37		ug/Kg		05/14/18 13:10		1
Perfluorononanoic acid (PFNA)	2.8		0.37		ug/Kg		05/14/18 13:10		1
Perfluorobutanesulfonic acid (PFBS)	3.1		0.49		ug/Kg	₽	05/14/18 13:10		1
Perfluorohexanesulfonic acid (PFHxS)	170	E	0.37	0.076	ug/Kg	☼	05/14/18 13:10	06/07/18 00:29	1
Perfluorooctanesulfonic acid (PFOS)	390	E	1.2	0.29	ug/Kg	₩	05/14/18 13:10	06/07/18 00:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	77		50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C4-PFHpA	64		50 - 150				05/14/18 13:10	06/07/18 00:29	1
13C4 PFOA	84		50 <sub>-</sub> 150				05/14/18 13:10	06/07/18 00:29	1
13C5 PFNA	56		50 - 150				05/14/18 13:10	06/07/18 00:29	1
1802 PFHxS	64		50 <sub>-</sub> 150				05/14/18 13:10	06/07/18 00:29	1
13C4 PFOS	57		50 - 150				05/14/18 13:10	06/07/18 00:29	1
Method: EPA 537 (Mod) - PFA Analyte		5.1, Table I Qualifier	3-15 - DL LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	24	U	37	9.5	ug/Kg	<del>-</del>	05/14/18 13:10	05/29/18 12:41	100
Perfluorooctanoic acid (PFOA)	13	J D	37	12	ug/Kg	☼	05/14/18 13:10	05/29/18 12:41	100
Perfluorononanoic acid (PFNA)	24	U	37	9.9	ug/Kg	☼	05/14/18 13:10	05/29/18 12:41	100
Perfluorobutanesulfonic acid (PFBS)	22	U	49	7.2	ug/Kg		05/14/18 13:10	05/29/18 12:41	100
, ,		_					05/14/18 13:10	05/20/40 42:44	
Perfluorohexanesulfonic acid (PEHxS)	300	D	37	7.6	ug/Kg	☼	03/14/10 13.10	05/29/16 12.41	100
Perfluorohexanesulfonic acid (PFHxS) Perfluorooctanesulfonic acid (PFOS)	300 650		37 120		ug/Kg ug/Kg	\$	05/14/18 13:10		100
(PFHxS) Perfluorooctanesulfonic acid		D							
(PFHxS) Perfluorooctanesulfonic acid (PFOS)	650	D Qualifier	120				05/14/18 13:10  Prepared	05/29/18 12:41	100
(PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution	650 %Recovery	D Qualifier	120				05/14/18 13:10  Prepared  05/14/18 13:10	05/29/18 12:41  Analyzed	100
(PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS	%Recovery	D Qualifier	120 <b>Limits</b> 50 - 150				05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10	05/29/18 12:41  Analyzed  05/29/18 12:41	100 Dil Fac
(PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA	<b>%Recovery</b> 82 69	D Qualifier	120  Limits  50 - 150 50 - 150				05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	05/29/18 12:41  Analyzed  05/29/18 12:41  05/29/18 12:41	100 Dil Fac 100 100
(PFHxS) Perfluorooctanesulfonic acid (PFOS) Isotope Dilution 13C3-PFBS 13C4-PFHpA 13C4 PFOA	%Recovery 82 69 81	D Qualifier	120  Limits  50 - 150  50 - 150  50 - 150				05/14/18 13:10  Prepared  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10  05/14/18 13:10	05/29/18 12:41  Analyzed  05/29/18 12:41  05/29/18 12:41  05/29/18 12:41	100  Dil Fac  100  100  100

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: ER-05 Lab Sample ID: 320-39023-56

Date Collected: 05/06/18 16:00 Matrix: Water Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	U	1.9	0.58	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorooctanoic acid (PFOA)	0.74	J M	1.9	0.51	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorononanoic acid (PFNA)	1.4	U	1.9	0.49	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorobutanesulfonic acid (PFBS)	0.52	J	1.9	0.44	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		1.9	0.36	ng/L		05/18/18 10:26	05/29/18 21:18	1
Perfluorooctanesulfonic acid (PFOS)	13		3.8	1.0	ng/L		05/18/18 10:26	05/29/18 21:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	84		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4-PFHpA	93		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4 PFOA	98		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C5 PFNA	104		50 - 150				05/18/18 10:26	05/29/18 21:18	1
1802 PFHxS	87		50 - 150				05/18/18 10:26	05/29/18 21:18	1
13C4 PFOS	91		50 - 150				05/18/18 10:26	05/29/18 21:18	1

Client Sample ID: IDW-KINGSLEY-SO-LDOS01 Lab Sample ID: 320-39023-57

Date Collected: 05/07/18 09:45

Matrix: Solid

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/29/18 15:26	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/29/18 15:26	1
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/29/18 15:26	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/29/18 15:26	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/29/18 15:26	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/29/18 15:26	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/29/18 15:26	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/29/18 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		78 - 120			-		05/29/18 15:26	1
1,2-Dichloroethane-d4 (Surr)	98		64 - 129					05/29/18 15:26	1
4-Bromofluorobenzene (Surr)	90		78 - 121					05/29/18 15:26	1
Dibromofluoromethane (Surr)	103		79 - 119					05/29/18 15:26	1

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:55	05/25/18 21:36	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:55	05/25/18 21:36	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:55	05/25/18 21:36	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:55	05/25/18 21:36	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:55	05/25/18 21:36	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:55	05/25/18 21:36	1

TestAmerica Sacramento

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: IDW-KINGSLEY-SO-LDOS01

Date Collected: 05/07/18 09:45 Matrix: Solid

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		05/21/18 08:55	05/25/18 21:36	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		05/21/18 08:55	05/25/18 21:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		49 - 120				05/21/18 08:55	05/25/18 21:36	1
2-Fluorophenol (Surr)	90		50 - 120				05/21/18 08:55	05/25/18 21:36	1
2,4,6-Tribromophenol (Surr)	97		51 - 120				05/21/18 08:55	05/25/18 21:36	1
Nitrobenzene-d5 (Surr)	88		51 - 120				05/21/18 08:55	05/25/18 21:36	1
Phenol-d5 (Surr)	78		47 - 120				05/21/18 08:55	05/25/18 21:36	1
Terphenyl-d14 (Surr)	94		56 <sub>-</sub> 120				05/21/18 08:55	05/25/18 21:36	1

Client Sample ID: IDW-KINGSLEY-WA-LDOS01 Lab Sample ID: 320-39023-58

Date Collected: 05/07/18 09:30 Matrix: Water

Date Received: 05/08/18 09:00

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/21/18 17:50	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/21/18 17:50	1
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/21/18 17:50	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/21/18 17:50	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/21/18 17:50	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/21/18 17:50	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/21/18 17:50	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/21/18 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		78 - 120					05/21/18 17:50	1
1,2-Dichloroethane-d4 (Surr)	109		64 - 129					05/21/18 17:50	1
4-Bromofluorobenzene (Surr)	95		78 - 121					05/21/18 17:50	1
Dibromofluoromethane (Surr)	103		79 - 119					05/21/18 17:50	1

4-Bioinionaoiobenzene (Gair)	90		10-121					00/21/10 11.00	,
Dibromofluoromethane (Surr)	103		79 - 119					05/21/18 17:50	1
Method: 8270D - Semivolatil	e Organic Co	mpounds	(GC/MS) - T	CLP					
Analyte	Result	Qualifier	LÓQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:46	05/25/18 20:46	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:46	05/25/18 20:46	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:46	05/25/18 20:46	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:46	05/25/18 20:46	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:46	05/25/18 20:46	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:46	05/25/18 20:46	1
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4,5-Trichlorophenol	0.0050	UM	0.050	0.0022	mg/L		05/21/18 08:46	05/25/18 20:46	1
2,4,6-Trichlorophenol	0.0050	U M	0.025	0.0014	mg/L		05/21/18 08:46	05/25/18 20:46	1
Pyridine 2,4,5-Trichlorophenol	0.022 0.0050	U U M	0.10 0.050	0.0057 0.0022	mg/L mg/L		05/21/18 08:46 05/21/18 08:46	05/25/18 20:46 05/25/18 20:46	

Lab Sample ID: 320-39023-57

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: IDW-KINGSLEY-WA-LDOS01

Lab Sample ID: 320-39023-58

Date Collected: 05/07/18 09:30 **Matrix: Water** Date Received: 05/08/18 09:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2-Fluorobiphenyl	68		49 - 120	05/21/18 08:46	05/25/18 20:46	1			
2-Fluorophenol (Surr)	51		50 - 120	05/21/18 08:46	05/25/18 20:46	1			
2,4,6-Tribromophenol (Surr)	92		51 - 120	05/21/18 08:46	05/25/18 20:46	1			
Nitrobenzene-d5 (Surr)	56		51 - 120	05/21/18 08:46	05/25/18 20:46	1			
Phenol-d5 (Surr)	51		47 - 120	05/21/18 08:46	05/25/18 20:46	1			
Terphenyl-d14 (Surr)	90		56 - 120	05/21/18 08:46	05/25/18 20:46	1			
<u></u>									

Client Sample ID: KLA07-SD1-01D Lab Sample ID: 320-39023-59

Date Collected: 05/06/18 11:30 **Matrix: Solid** Date Received: 05/08/18 09:00 Percent Solids: 73.7

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.12	J	0.40	0.10	ug/Kg	₩	05/19/18 09:21	05/31/18 02:30	1
Perfluorooctanoic acid (PFOA)	0.48		0.40	0.13	ug/Kg	₩	05/19/18 09:21	05/31/18 02:30	1
Perfluorononanoic acid (PFNA)	0.27	U	0.40	0.11	ug/Kg	☼	05/19/18 09:21	05/31/18 02:30	1
Perfluorobutanesulfonic acid (PFBS)	0.20	J	0.54	0.079	ug/Kg	₽	05/19/18 09:21	05/31/18 02:30	1
Perfluorohexanesulfonic acid (PFHxS)	2.1		0.40	0.083	ug/Kg	₽	05/19/18 09:21	05/31/18 02:30	1
Perfluorooctanesulfonic acid (PFOS)	15	J1	1.3	0.32	ug/Kg	☼	05/19/18 09:21	05/31/18 02:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3-PFBS	73		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4-PFHpA	81		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4 PFOA	88		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C5 PFNA	94		50 - 150				05/19/18 09:21	05/31/18 02:30	1
18O2 PFHxS	79		50 - 150				05/19/18 09:21	05/31/18 02:30	1
13C4 PFOS	78		50 <sub>-</sub> 150				05/19/18 09:21	05/31/18 02:30	1

#### **Default Detection Limits**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

## Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Leach: 1311

Analyte	LOQ	DL	Units	Method
1,1-Dichloroethene	0.010	0.0023	mg/L	8260B
1,1-Dichloroethene	0.010	0.0023	mg/L	8260B
1,2-Dichloroethane	0.010	0.0013	mg/L	8260B
1,2-Dichloroethane	0.010	0.0013	mg/L	8260B
2-Butanone (MEK)	0.10	0.018	mg/L	8260B
2-Butanone (MEK)	0.10	0.018	mg/L	8260B
Benzene	0.010	0.0016	mg/L	8260B
Benzene	0.010	0.0016	mg/L	8260B
Carbon tetrachloride	0.010	0.0019	mg/L	8260B
Carbon tetrachloride	0.010	0.0019	mg/L	8260B
Chlorobenzene	0.010	0.0017	mg/L	8260B
Chlorobenzene	0.010	0.0017	mg/L	8260B
Chloroform	0.010	0.0016	mg/L	8260B
Chloroform	0.010	0.0016	mg/L	8260B
Tetrachloroethene	0.010	0.0020	mg/L	8260B
Tetrachloroethene	0.010	0.0020	mg/L	8260B
Trichloroethene	0.010	0.0016	mg/L	8260B
Trichloroethene	0.010	0.0016	mg/L	8260B
Vinyl chloride	0.010	0.0010	mg/L	8260B
Vinyl chloride	0.010	0.0010	mg/L	8260B

### Method: 8270D - Semivolatile Organic Compounds (GC/MS) - TCLP

Prep: 3510C Leach: 1311

Analyte	LOQ	DL	Units	Method
1,4-Dichlorobenzene	0.020	0.0016	mg/L	8270D
1,4-Dichlorobenzene	0.020	0.0016	mg/L	8270D
2,4,5-Trichlorophenol	0.050	0.0022	mg/L	8270D
2,4,5-Trichlorophenol	0.050	0.0022	mg/L	8270D
2,4,6-Trichlorophenol	0.025	0.0014	mg/L	8270D
2,4,6-Trichlorophenol	0.025	0.0014	mg/L	8270D
2,4-Dinitrotoluene	0.050	0.0083	mg/L	8270D
2,4-Dinitrotoluene	0.050	0.0083	mg/L	8270D
2-Methylphenol	0.050	0.0049	mg/L	8270D
2-Methylphenol	0.050	0.0049	mg/L	8270D
3 & 4 Methylphenol	0.050	0.0013	mg/L	8270D
3 & 4 Methylphenol	0.050	0.0013	mg/L	8270D
Hexachlorobenzene	0.050	0.0033	mg/L	8270D
Hexachlorobenzene	0.050	0.0033	mg/L	8270D
Hexachlorobutadiene	0.050	0.017	mg/L	8270D
Hexachlorobutadiene	0.050	0.017	mg/L	8270D
Hexachloroethane	0.050	0.011	mg/L	8270D
Hexachloroethane	0.050	0.011	mg/L	8270D
Nitrobenzene	0.050	0.0041	mg/L	8270D
Nitrobenzene	0.050	0.0041	mg/L	8270D
Pentachlorophenol	0.25	0.10	mg/L	8270D
Pentachlorophenol	0.25	0.10	mg/L	8270D
Pyridine	0.10	0.0057	mg/L	8270D
Pyridine	0.10	0.0057	mg/L	8270D

#### **Default Detection Limits**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

## Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Prep: 3535

Analyte	LOQ	DL	Units	Method
Perfluorobutanesulfonic acid (PFBS)	2.0	0.46	ng/L	EPA 537 (Mod)
Perfluoroheptanoic acid (PFHpA)	2.0	0.61	ng/L	EPA 537 (Mod)
Perfluorohexanesulfonic acid (PFHxS)	2.0	0.38	ng/L	EPA 537 (Mod)
Perfluorononanoic acid (PFNA)	2.0	0.52	ng/L	EPA 537 (Mod)
Perfluorooctanesulfonic acid (PFOS)	4.0	1.1	ng/L	EPA 537 (Mod)
Perfluorooctanoic acid (PFOA)	2.0	0.54	ng/L	EPA 537 (Mod)

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Prep: SHAKE

Analyte	LOQ	DL	Units	Method
Perfluorobutanesulfonic acid (PFBS)	0.40	0.059	ug/Kg	EPA 537 (Mod)
Perfluoroheptanoic acid (PFHpA)	0.30	0.078	ug/Kg	EPA 537 (Mod)
Perfluorohexanesulfonic acid (PFHxS)	0.30	0.062	ug/Kg	EPA 537 (Mod)
Perfluorononanoic acid (PFNA)	0.30	0.081	ug/Kg	EPA 537 (Mod)
Perfluorooctanesulfonic acid (PFOS)	1.0	0.24	ug/Kg	EPA 537 (Mod)
Perfluorooctanoic acid (PFOA)	0.30	0.10	ug/Kg	EPA 537 (Mod)

### **Surrogate Summary**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid Prep Type: TCLP** 

		Percent Surrogate Recov					
		TOL	DCA	BFB	DBFM		
Lab Sample ID	Client Sample ID	(78-120)	(64-129)	(78-121)	(79-119)		
320-39023-57	IDW-KINGSLEY-SO-LDOS01	101	98	90	103		
LB 280-415139/1-A	Method Blank	92	99	98	114		
LCS 280-415139/2-A	Lab Control Sample	105	103	88	103		
Surrogate Legend							

TOL = Toluene-d8 (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Water Prep Type: TCLP** 

_			Pe	rcent Surre	ogate Reco
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(78-120)	(64-129)	(78-121)	(79-119)
320-39023-58	IDW-KINGSLEY-WA-LDOS01	100	109	95	103
LB3 280-415294/1-A	Method Blank	101	103	96	102
LCS 280-415294/2-A	Lab Control Sample	96	104	92	100
Surrogate Legend					

Surrogate Legend

TOL = Toluene-d8 (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid Prep Type: TCLP** 

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	TBP	NBZ	PHL	TPHL		
Lab Sample ID	Client Sample ID	(49-120)	(50-120)	(51-120)	(51-120)	(47-120)	(56-120)		
320-39023-57	IDW-KINGSLEY-SO-LDOS01	100	90	97	88	78	94		
320-39023-57 MS	IDW-KINGSLEY-SO-LDOS01	90	81	91	79	70	88		
320-39023-57 MSD	IDW-KINGSLEY-SO-LDOS01	95	88	100	85	77	95		
B 280-415138/1-C	Method Blank	79	67	87	66	55	92		
LCS 280-415138/2-C	Lab Control Sample	97	85	95	86	75	93		

**Surrogate Legend** 

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

### **Surrogate Summary**

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
		FBP	2FP	TBP	NBZ	PHL	TPHL	
Lab Sample ID	Client Sample ID	(49-120)	(50-120)	(51-120)	(51-120)	(47-120)	(56-120)	
LB3 280-416023/1-A	Method Blank	89	77	89	74	64	95	
LCS 280-416023/2-A	Lab Control Sample	103	92	97	87	80	99	

#### **Surrogate Legend**

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water Prep Type: TCLP

		Percent Surrogate Recovery (Acceptance Limits)							
		FBP	2FP	TBP	NBZ	PHL	TPHL		
Lab Sample ID	Client Sample ID	(49-120)	(50-120)	(51-120)	(51-120)	(47-120)	(56-120)		
320-39023-58	IDW-KINGSLEY-WA-LDOS01	68	51	92	56	51	90		

#### Surrogate Legend

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

# **Isotope Dilution Summary**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Solid Prep Type: Total/NA

			Perce				ceptance Lir	nits
		3C3-PFB	PFHpA	PFOA	PFNA	PFHxS	PFOS	
ab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	
20-39023-9	KLA-01-SB1-01	74	82	86	60	78	48 Q	
20-39023-9 - DL	KLA-01-SB1-01	79 M	89	90	90	82	74	
20-39023-10	KLA-01-SB1-02	69	83	82	67	75	54	
20-39023-10 - DL	KLA-01-SB1-02	71 M	78	89	79	70	63	
20-39023-11	KLA-01-SB2-01	68	84	88	92	71	72	
20-39023-12	KLA-01-SB2-02	71	83	84	87	76	74	
20-39023-13	KLA-01-SB3-01	67	82	84	84	73	68	
20-39023-14	KLA-01-SB3-02	67	80	80	82	70	64	
20-39023-15	KLA02-SB1-01	81	93	93	100	88	86	
20-39023-15 MS	KLA02-SB1-01	77	83	87	91	82	80	
20-39023-15 MSD	KLA02-SB1-01	80	90	95	96	83	85	
20-39023-16	KLA02-SB1-02	71	81	84	85	77	76	
20-39023-10	KLA02-SB2-01	78	85	94	66	78	55	
20-39023-17 20-39023-17 - DL	KLA02-SB2-01	94 M	72	87	84	66	68	
20-39023-17 - DL 20-39023-18	KLA02-SB2-01 KLA02-SB2-02	82	72 78	89	71	72	60	
20-39023-18 20-39023-18 - DL	KLA02-SB2-02	71	78	91	86	82	71	
20-39023-16 - DL 20-39023-19	KLA02-SB2-02 KLA02-SB3-01	71	76 86	91	85	82	68	
20-39023-19 20-39023-19 - DL	KLA02-SB3-01	76 77 M	84	92	100	75	74	
	KLA02-SB3-01 KLA02-SB3-02	77 101		90	92	80	76	
20-39023-20			80					
20-39023-21	KLA03-SB1-01	68	83	85	83	71	69	
0-39023-22	KLA03-SB1-02	70	83	87	91	74	71	
0-39023-23	KLA03-SB2-01	69	83	83	81	73	72	
0-39023-24	KLA03-SB2-02	68	83	82	78	75	70	
0-39023-25	KLA03-SB3-01	78	85	85	87	83	79	
0-39023-26	KLA03-SB3-02	77	85	84	83	79	76	
0-39023-27	KLA04-SB1-01	87	98	88	37 Q	87	30 Q	
0-39023-27 - DL	KLA04-SB1-01	99 M	77	93	79	67	70	
0-39023-28	KLA04-SB1-02	95	85	84	34 Q	78	26 Q	
0-39023-28 - DL2	KLA04-SB1-02	96 M	80	95	73	76	63	
20-39023-28 - DL	KLA04-SB1-02	70 M	84	84	76	71	59	
20-39023-29	KLA04-SB2-01	96	88	83	25 Q	86	18 Q	
20-39023-29 - DL	KLA04-SB2-01	111 M	74	80	68	64	58	
20-39023-30	KLA04-SB2-02	125	69	82	55	65	39 Q	
20-39023-30 - DL	KLA04-SB2-02	133 M	70	95	78	78	61	
20-39023-31	KLA04-SB3-01	86	88	84	28 Q	77	20 Q	
20-39023-31 - DL2	KLA04-SB3-01	71 M	74	78	73	53	57	
20-39023-31 - DL	KLA04-SB3-01	54	75	82	59	69	47 Q	
20-39023-32	KLA04-SB3-02	109	77	87	51	65	39 Q	
20-39023-32 - DL2	KLA04-SB3-02	72 M	62	89	78	69	64	
20-39023-32 - DL	KLA04-SB3-02	88	84	87	78	76	63	
20-39023-33	KLA05-SB1-01	72	81	90	74	68	68	
20-39023-33 - DL	KLA05-SB1-01	54	83	97	90	75	69	
20-39023-34	KLA05-SB1-02	68	81	88	88	70	72	
20-39023-35	KLA05-SB2-01	69	85	92	89	71	73	
20-39023-35 - DL	KLA05-SB2-01	59	82	86	89	70	69	
20-39023-36	KLA05-SB2-02	70	74	85	87	74	72	
20-39023-36 - DL	KLA05-SB2-02 KLA05-SB2-02	70 72	74 77	92	85	74 72	72 70	
20-39023-30 - DL 20-39023-37	KLA05-SB2-02 KLA05-SB3-01	122	66	92 87				
20-39023-37 20-39023-37 - DL	KLA05-SB3-01	60 M	80	82	19 Q 68	46 Q 75	13 Q 53	

## **Isotope Dilution Summary**

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Matrix: Solid Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		3C3-PFB	PFHpA	PFOA	PFNA	PFHxS	PFOS		
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)		
320-39023-38	KLA05-SB3-02	73	81	87	50	73	40 Q		
320-39023-38 - DL	KLA05-SB3-02	78 M	81	99	98	79	70		
320-39023-39 - DL	KLA06-SB1-01	67	76	82	79	71	68		
320-39023-39	KLA06-SB1-01	72	77	79	62	73	62		
320-39023-40 - DL	KLA06-SB1-02	69	76	81	78	69	68		
320-39023-40	KLA06-SB1-02	68	81	76	70	72	68		
320-39023-41 - DL	KLA06-SB2-01	67	80	85	77	74	64		
320-39023-41 - DL2	KLA06-SB2-01	68 M	66	81	74	71	60		
320-39023-41	KLA06-SB2-01	82	82	84	54	75	54		
320-39023-41 MS - DL2	KLA06-SB2-01	44 M Q	71	77	73	65	66		
320-39023-41 MS - DL	KLA06-SB2-01	71	79	81	74	73	64		
320-39023-41 MS	KLA06-SB2-01	88	82	85	48 Q	69	46 Q		
320-39023-41 MSD - DL2	KLA06-SB2-01	76 M	76	81	75	66	71		
320-39023-41 MSD - DL	KLA06-SB2-01	62	80	82	73	72	61		
320-39023-41 MSD	KLA06-SB2-01	86	82	83	48 Q	63	45 Q		
320-39023-42 - DL2	KLA06-SB2-02	61 M	72	78	78	64	59		
320-39023-42 - DL	KLA06-SB2-02	73	78	90	75	72	61		
320-39023-42	KLA06-SB2-02	81	83	83	44 Q	75	40 Q		
320-39023-43	KLA07-SD1-01	68	80	84	82	73	75		
320-39023-51	KLA03-SB-2-01D	79	90	89	93	84	82		
320-39023-52 - DL2	KLA06-SB-2-02D	51 M	64	84	74	59	57		
320-39023-52 - DL	KLA06-SB-2-02D	66	75	84	79	71	62		
320-39023-52	KLA06-SB-2-02D	76	86	83	47 Q	76	44 Q		
320-39023-53	KLA02-SB2-02D	78	78	84	71	73	60		
320-39023-53 - DL	KLA02-SB2-02D	74 M	72	86	81	70	67		
320-39023-54	KLA02-SB1-02D	73	83	91	96	81	80		
320-39023-55 - DL	KLA05-SB1-01D	82 M	69	81	84	61	62		
320-39023-55	KLA05-SB1-01D	77	64	84	56	64	57		
320-39023-59	KLA07-SD1-01D	73	81	88	94	79	78		
320-39023-59 MS	KLA07-SD1-01D	71	79	88	95	76	77		
320-39023-59 MSD	KLA07-SD1-01D	72	81	91	94	77	78		
LCS 320-223091/2-A	Lab Control Sample	80	89	91	94	86	80		
LCS 320-223092/2-A	Lab Control Sample	71	73	79	81	73	71		
LCS 320-224254/2-A	Lab Control Sample	81	88	91	91	85	83		
MB 320-223091/1-A	Method Blank	81	85	90	91	84	80		
MB 320-223092/1-A	Method Blank	68	71	78	75	71	70		
MB 320-224254/1-A	Method Blank	77	85	91	93	85	84		

#### **Surrogate Legend**

13C3-PFBS = 13C3-PFBS

PFHpA = 13C4-PFHpA

PFOA = 13C4 PFOA

PFNA = 13C5 PFNA PFHxS = 18O2 PFHxS

PFOS = 13C4 PFOS

TestAmerica Job ID: 320-39023-1

## **Isotope Dilution Summary**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Matrix: Water Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		3C3-PFB	PFHpA	PFOA	PFNA	PFHxS	PFOS		
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)		
320-39023-1	MW-KLA01-01-01	75	79	87	81	80	74		
320-39023-1 - DL	MW-KLA01-01-01	72	77	83	77	72	67		
320-39023-2	MW-KLA02-01-01	321 Q	44 Q	65	40 Q	77	28 Q		
320-39023-2 - DL	MW-KLA02-01-01	176 Q	54	68	53	96	44 Q		
320-39023-3	MW-KLA03-01-01	75	69	85	62	66	54		
320-39023-3 - DL	MW-KLA03-01-01	68 M	72	83	77	72	75		
20-39023-4 - DL	MW-KLA04-01-01	63	65	75	67	62	62		
320-39023-4	MW-KLA04-01-01	71	74	80	79	69	69		
20-39023-5	MW-573-03-PRL05-01	136	46 Q	77	58	54	48 Q		
20-39023-5 - DL	MW-573-03-PRL05-01	99 M	64	73	69	73	66		
320-39023-5 MS	MW-573-03-PRL05-01	146	48 Q	80	62	55	48 Q		
20-39023-5 MS - DL	MW-573-03-PRL05-01	107 M	64	86	71	82	61		
20-39023-5 MSD	MW-573-03-PRL05-01	134	45 Q	76	58	54	45 Q		
320-39023-5 MSD - DL	MW-573-03-PRL05-01	107 M	65	76	72	76	64		
320-39023-6	MW-572-02-PRL05-01	85	83	89	82	81	74		
20-39023-6 - DL	MW-572-02-PRL05-01	69 M	79	92	84	77	75		
20-39023-7	MW-KLA06-01-01	233 Q	37 Q	52	50	54	36 Q		
20-39023-7 - DL2	MW-KLA06-01-01	145 M	53	58	51	76	46 Q		
20-39023-8	KLA08-SW1-01	76	76	95	103	93	101		
20-39023-44	ER-01	88	88	90	92	88	82		
20-39023-45	FB-01	91	101	94	105	93	95		
20-39023-46	ER-02	75	71	80	84	75	77		
20-39023-47	ER-03	65	66	69	71	63	64		
20-39023-48	ER-04	70	70	73	78	69	69		
20-39023-49	MW-572-02-PRL05-01D	59	60	65	61	58	55		
20-39023-49 - DL	MW-572-02-PRL05-01D	53	56	63	60	52	53		
20-39023-56	ER-05	84	93	98	104	87	91		
CS 320-223346/2-A	Lab Control Sample	82	94	93	95	89	83		
.CS 320-223615/2-A	Lab Control Sample	78	85	90	90	80	86		
CS 320-223901/2-A	Lab Control Sample	81	83	84	84	79	79		
CS 320-224065/2-A	Lab Control Sample	66	70	74	72	70	66		
CS 320-224509/2-A	Lab Control Sample	80	85	88	91	82	83		
CSD 320-224509/3-A	Lab Control Sample Dup	72	76	81	82	77	76		
1B 320-223346/1-A	Method Blank	84	94	96	96	87	86		
MB 320-223615/1-A	Method Blank	80	84	93	94	85	81		
MB 320-223901/1-A	Method Blank	85	86	88	92	83	82		
MB 320-224065/1-A	Method Blank	88	93	103	106	94	92		
MB 320-224509/1-A	Method Blank	75	77	82	83	77	76		

#### Surrogate Legend

13C3-PFBS = 13C3-PFBS

PFHpA = 13C4-PFHpA

PFOA = 13C4 PFOA

PFNA = 13C5 PFNA

PFHxS = 1802 PFHxS

PFOS = 13C4 PFOS

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LB3 280-415294/1-A

Matrix: Water

Analysis Batch: 415557

Client Sample ID: Method Blank Prep Type: TCLP

-	LB3	LB3							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/21/18 16:07	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/21/18 16:07	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/21/18 16:07	1
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/21/18 16:07	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/21/18 16:07	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/21/18 16:07	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/21/18 16:07	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/21/18 16:07	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/21/18 16:07	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/21/18 16:07	1

LB3 LB3

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101	78 - 120		05/21/18 16:07	1
1,2-Dichloroethane-d4 (Surr)	103	64 - 129		05/21/18 16:07	1
4-Bromofluorobenzene (Surr)	96	78 - 121		05/21/18 16:07	1
Dibromofluoromethane (Surr)	102	79 - 119		05/21/18 16:07	1

Lab Sample ID: LCS 280-415294/2-A

**Matrix: Water** 

**Analysis Batch: 415557** 

Client Sample ID: Lab Control Sample

**Prep Type: TCLP** 

	Spike	LCS LCS			%Rec.	
Analyte	Added	Result Qual	lifier Unit	D %Rec	Limits	
Benzene	0.0500	0.0498	mg/L	100	74 - 135	
2-Butanone (MEK)	0.200	0.226	mg/L	113	44 - 150	
Carbon tetrachloride	0.0500	0.0493	mg/L	99	67 - 135	
Chlorobenzene	0.0500	0.0457	mg/L	91	76 - 135	
Chloroform	0.0500	0.0518	mg/L	104	76 - 120	
1,2-Dichloroethane	0.0500	0.0549	mg/L	110	70 - 135	
1,1-Dichloroethene	0.0500	0.0481	mg/L	96	71 - 136	
Tetrachloroethene	0.0500	0.0428	mg/L	86	70 - 135	
Trichloroethene	0.0500	0.0471	mg/L	94	73 - 135	
Vinyl chloride	0.0500	0.0436	mg/L	87	40 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	96		78 - 120
1,2-Dichloroethane-d4 (Surr)	104		64 - 129
4-Bromofluorobenzene (Surr)	92		78 - 121
Dibromofluoromethane (Surr)	100		79 - 119

Lab Sample ID: LB 280-415139/1-A

Matrix: Solid

Analysis Batch: 416517

Client Sample ID: Method Blank

**Prep Type: TCLP** 

LB LB

	LB	LD							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0040	U	0.010	0.0016	mg/L			05/29/18 09:40	1
2-Butanone (MEK)	0.040	U	0.10	0.018	mg/L			05/29/18 09:40	1
Carbon tetrachloride	0.0040	U	0.010	0.0019	mg/L			05/29/18 09:40	1

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

#### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 280-415139/1-A

**Matrix: Solid** 

**Analysis Batch: 416517** 

**Client Sample ID: Method Blank** 

**Prep Type: TCLP** 

	LB	LB							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.0040	U	0.010	0.0017	mg/L			05/29/18 09:40	1
Chloroform	0.0040	U	0.010	0.0016	mg/L			05/29/18 09:40	1
1,2-Dichloroethane	0.0040	U	0.010	0.0013	mg/L			05/29/18 09:40	1
1,1-Dichloroethene	0.0080	U	0.010	0.0023	mg/L			05/29/18 09:40	1
Tetrachloroethene	0.0040	U	0.010	0.0020	mg/L			05/29/18 09:40	1
Trichloroethene	0.0040	U	0.010	0.0016	mg/L			05/29/18 09:40	1
Vinyl chloride	0.0020	U	0.010	0.0010	mg/L			05/29/18 09:40	1

LB LB %Recovery Qualifier Surrogate Limits Dil Fac Prepared Analyzed Toluene-d8 (Surr) 92 78 - 120 05/29/18 09:40 99 64 - 129 05/29/18 09:40 1,2-Dichloroethane-d4 (Surr) 1 4-Bromofluorobenzene (Surr) 98 78 - 121 05/29/18 09:40 1 Dibromofluoromethane (Surr) 79 - 119 05/29/18 09:40 114

Lab Sample ID: LCS 280-415139/2-A

**Matrix: Solid** 

**Analysis Batch: 416517** 

**Client Sample ID: Lab Control Sample Prep Type: TCLP** 

	Spike	LCS L	_CS			%Rec.
Analyte	Added	Result C	Qualifier Unit	D %	%Rec	Limits
Benzene	0.0500	0.0524	mg/L		105	74 - 135
2-Butanone (MEK)	0.200	0.181	mg/L		91	44 - 150
Carbon tetrachloride	0.0500	0.0500	mg/L		100	67 <sub>-</sub> 135
Chlorobenzene	0.0500	0.0476	mg/L		95	76 - 135
Chloroform	0.0500	0.0532	mg/L		106	76 - 120
1,2-Dichloroethane	0.0500	0.0505	mg/L		101	70 - 135
1,1-Dichloroethene	0.0500	0.0558	mg/L		112	71 - 136
Tetrachloroethene	0.0500	0.0479	mg/L		96	70 - 135
Trichloroethene	0.0500	0.0500	mg/L		100	73 - 135
Vinyl chloride	0.0500	0.0459	mg/L		92	40 - 144

LCS LCS Surrogate %Recovery Qualifier Limits 78 - 120 Toluene-d8 (Surr) 105 103 1,2-Dichloroethane-d4 (Surr) 64 - 129 4-Bromofluorobenzene (Surr) 88 78 - 121 Dibromofluoromethane (Surr) 103 79 - 119

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: LB3 280-416023/1-A **Client Sample ID: Method Blank Matrix: Water** Prep Type: Total/NA

**Analysis Batch: 416357 Prep Batch: 416023** 

	LB3	LB3							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:46	05/25/18 17:01	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:46	05/25/18 17:01	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:46	05/25/18 17:01	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:46	05/25/18 17:01	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB3 280-416023/1-A

**Matrix: Water** 

**Analysis Batch: 416357** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 416023

Allalysis Datell. + 10001								i rep baten.	T10020
	LB3	LB3							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:46	05/25/18 17:01	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:46	05/25/18 17:01	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:46	05/25/18 17:01	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:46	05/25/18 17:01	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:46	05/25/18 17:01	1
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:46	05/25/18 17:01	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		05/21/18 08:46	05/25/18 17:01	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		05/21/18 08:46	05/25/18 17:01	1

LB3 LB3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		49 - 120	05/21/18 08:46	05/25/18 17:01	1
2-Fluorophenol (Surr)	77		50 - 120	05/21/18 08:46	05/25/18 17:01	1
2,4,6-Tribromophenol (Surr)	89		51 - 120	05/21/18 08:46	05/25/18 17:01	1
Nitrobenzene-d5 (Surr)	74		51 - 120	05/21/18 08:46	05/25/18 17:01	1
Phenol-d5 (Surr)	64		47 - 120	05/21/18 08:46	05/25/18 17:01	1
Terphenyl-d14 (Surr)	95		56 - 120	05/21/18 08:46	05/25/18 17:01	1

Lab Sample ID: LCS 280-416023/2-A

**Matrix: Water** 

**Analysis Batch: 416357** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 416023

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2-Methylphenol	0.250	0.232		mg/L		93	45 - 120	
3 & 4 Methylphenol	0.500	0.466		mg/L		93	44 - 120	
1,4-Dichlorobenzene	0.250	0.237		mg/L		95	36 - 120	
2,4-Dinitrotoluene	0.100	0.0686		mg/L		69	36 - 120	
Hexachlorobenzene	0.100	0.0917		mg/L		92	52 - 120	
Hexachlorobutadiene	0.250	0.235		mg/L		94	35 - 120	
Hexachloroethane	0.250	0.220		mg/L		88	35 - 120	
Nitrobenzene	0.250	0.231		mg/L		93	50 - 120	
Pentachlorophenol	0.500	0.409		mg/L		82	39 - 120	
Pyridine	0.250	0.0593	J	mg/L		24	10 - 121	
2,4,5-Trichlorophenol	0.250	0.277		mg/L		111	46 - 120	
2,4,6-Trichlorophenol	0.250	0.278		mg/L		111	43 - 120	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	103		49 - 120
2-Fluorophenol (Surr)	92		50 - 120
2,4,6-Tribromophenol (Surr)	97		51 - 120
Nitrobenzene-d5 (Surr)	87		51 - 120
Phenol-d5 (Surr)	80		47 - 120
Terphenyl-d14 (Surr)	99		56 <sub>-</sub> 120

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 280-415138/1-C

**Matrix: Solid** 

Analysis Batch: 416357

**Client Sample ID: Method Blank Prep Type: TCLP** 

**Prep Batch: 415600** 

-	LB	LB						•	
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.010	U	0.050	0.0049	mg/L		05/21/18 08:55	05/25/18 17:51	1
3 & 4 Methylphenol	0.0025	U	0.050	0.0013	mg/L		05/21/18 08:55	05/25/18 17:51	1
1,4-Dichlorobenzene	0.020	U	0.020	0.0016	mg/L		05/21/18 08:55	05/25/18 17:51	1
2,4-Dinitrotoluene	0.022	U	0.050	0.0083	mg/L		05/21/18 08:55	05/25/18 17:51	1
Hexachlorobenzene	0.010	U	0.050	0.0033	mg/L		05/21/18 08:55	05/25/18 17:51	1
Hexachlorobutadiene	0.050	U	0.050	0.017	mg/L		05/21/18 08:55	05/25/18 17:51	1
Hexachloroethane	0.022	U	0.050	0.011	mg/L		05/21/18 08:55	05/25/18 17:51	1
Nitrobenzene	0.010	U	0.050	0.0041	mg/L		05/21/18 08:55	05/25/18 17:51	1
Pentachlorophenol	0.20	U	0.25	0.10	mg/L		05/21/18 08:55	05/25/18 17:51	1
Pyridine	0.022	U	0.10	0.0057	mg/L		05/21/18 08:55	05/25/18 17:51	1
2,4,5-Trichlorophenol	0.0050	U	0.050	0.0022	mg/L		05/21/18 08:55	05/25/18 17:51	1
2,4,6-Trichlorophenol	0.0050	U	0.025	0.0014	mg/L		05/21/18 08:55	05/25/18 17:51	1

LB LB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		49 - 120	05/21/18 08:55	05/25/18 17:51	1
2-Fluorophenol (Surr)	67		50 - 120	05/21/18 08:55	05/25/18 17:51	1
2,4,6-Tribromophenol (Surr)	87		51 - 120	05/21/18 08:55	05/25/18 17:51	1
Nitrobenzene-d5 (Surr)	66		51 - 120	05/21/18 08:55	05/25/18 17:51	1
Phenol-d5 (Surr)	55		47 - 120	05/21/18 08:55	05/25/18 17:51	1
Terphenyl-d14 (Surr)	92		56 - 120	05/21/18 08:55	05/25/18 17:51	1

Lab Sample ID: LCS 280-415138/2-C

Matrix: Solid

**Analysis Batch: 416357** 

**Client Sample ID: Lab Control Sample Prep Type: TCLP** 

**Prep Batch: 415600** 

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2-Methylphenol	0.250	0.217		mg/L		87	45 - 120	
3 & 4 Methylphenol	0.500	0.427		mg/L		85	44 - 120	
1,4-Dichlorobenzene	0.250	0.212		mg/L		85	36 - 120	
2,4-Dinitrotoluene	0.100	0.0672		mg/L		67	36 - 120	
Hexachlorobenzene	0.100	0.0902		mg/L		90	52 - 120	
Hexachlorobutadiene	0.250	0.216		mg/L		86	35 - 120	
Hexachloroethane	0.250	0.200		mg/L		80	35 - 120	
Nitrobenzene	0.250	0.224		mg/L		90	50 - 120	
Pentachlorophenol	0.500	0.361		mg/L		72	39 - 120	
Pyridine	0.250	0.118		mg/L		47	10 - 121	
2,4,5-Trichlorophenol	0.250	0.258		mg/L		103	46 - 120	
2,4,6-Trichlorophenol	0.250	0.263		mg/L		105	43 - 120	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	97		49 - 120
2-Fluorophenol (Surr)	85		50 - 120
2,4,6-Tribromophenol (Surr)	95		51 - 120
Nitrobenzene-d5 (Surr)	86		51 - 120
Phenol-d5 (Surr)	75		47 - 120
Terphenyl-d14 (Surr)	93		56 - 120

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 320-39023-57 MS

**Matrix: Solid** 

Analysis Batch: 416357

Client Sample ID: IDW-KINGSLEY-SO-LDOS01 **Prep Type: TCLP** 

**Prep Batch: 415600** 

-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
2-Methylphenol	0.010	U	0.250	0.217		mg/L		87	45 - 120
3 & 4 Methylphenol	0.0025	U	0.500	0.422		mg/L		84	44 - 120
1,4-Dichlorobenzene	0.020	U	0.250	0.213		mg/L		85	36 - 120
2,4-Dinitrotoluene	0.022	U	0.100	0.0731		mg/L		73	36 - 120
Hexachlorobenzene	0.010	U	0.100	0.0841		mg/L		84	52 - 120
Hexachlorobutadiene	0.050	U	0.250	0.215		mg/L		86	35 - 120
Hexachloroethane	0.022	U	0.250	0.198		mg/L		79	35 - 120
Nitrobenzene	0.010	U	0.250	0.215		mg/L		86	50 - 120
Pentachlorophenol	0.20	U	0.500	0.368		mg/L		74	39 - 120
Pyridine	0.022	U	0.250	0.142		mg/L		57	10 - 121
2,4,5-Trichlorophenol	0.0050	U	0.250	0.244		mg/L		97	46 - 120
2,4,6-Trichlorophenol	0.0050	U	0.250	0.252		mg/L		101	43 - 120

MS MS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	90		49 - 120
2-Fluorophenol (Surr)	81		50 - 120
2,4,6-Tribromophenol (Surr)	91		51 - 120
Nitrobenzene-d5 (Surr)	79		51 - 120
Phenol-d5 (Surr)	70		47 - 120
Terphenyl-d14 (Surr)	88		56 - 120

Lab Sample ID: 320-39023-57 MSD

**Matrix: Solid** 

**Analysis Batch: 416357** 

Client Sample ID: IDW-KINGSLEY-SO-LDOS01

**Prep Type: TCLP** 

**Prep Batch: 415600** 

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2-Methylphenol	0.010	U	0.250	0.245		mg/L		98	45 - 120	12	30
3 & 4 Methylphenol	0.0025	U	0.500	0.478		mg/L		96	44 - 120	12	30
1,4-Dichlorobenzene	0.020	U	0.250	0.235		mg/L		94	36 - 120	10	30
2,4-Dinitrotoluene	0.022	U	0.100	0.0818		mg/L		82	36 - 120	11	30
Hexachlorobenzene	0.010	U	0.100	0.0978		mg/L		98	52 - 120	15	30
Hexachlorobutadiene	0.050	U	0.250	0.226		mg/L		90	35 - 120	5	30
Hexachloroethane	0.022	U	0.250	0.218		mg/L		87	35 - 120	9	30
Nitrobenzene	0.010	U	0.250	0.230		mg/L		92	50 - 120	6	30
Pentachlorophenol	0.20	U	0.500	0.388		mg/L		78	39 - 120	5	30
Pyridine	0.022	U	0.250	0.136		mg/L		55	10 - 121	4	30
2,4,5-Trichlorophenol	0.0050	U	0.250	0.267		mg/L		107	46 - 120	9	30
2,4,6-Trichlorophenol	0.0050	U	0.250	0.274		mg/L		109	43 - 120	8	30

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	95		49 - 120
2-Fluorophenol (Surr)	88		50 - 120
2,4,6-Tribromophenol (Surr)	100		51 - 120
Nitrobenzene-d5 (Surr)	85		51 - 120
Phenol-d5 (Surr)	77		47 - 120
Terphenyl-d14 (Surr)	95		56 - 120

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15

Lab Sample ID: MB 320-223091/1-A

**Matrix: Solid** 

Analysis Batch: 225894

**Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 223091** 

	MB	MB							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.20	U	0.30	0.078	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
Perfluorooctanoic acid (PFOA)	0.20	U	0.30	0.10	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
Perfluorononanoic acid (PFNA)	0.20	U	0.30	0.081	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
Perfluorobutanesulfonic acid (PFBS)	0.18	U	0.40	0.059	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	U	0.30	0.062	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	1.0	0.24	ug/Kg		05/14/18 13:10	05/29/18 03:17	1
	MB	MB							

Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 13C3-PFBS 81 50 - 150 05/14/18 13:10 05/29/18 03:17 13C4-PFHpA 85 50 - 150 05/14/18 13:10 05/29/18 03:17 1 13C4 PFOA 90 50 - 150 05/14/18 13:10 05/29/18 03:17 1 13C5 PFNA 91 50 - 150 05/14/18 13:10 05/29/18 03:17 1802 PFHxS 50 - 150 1 84 05/14/18 13:10 05/29/18 03:17 13C4 PFOS 80 50 - 150 05/14/18 13:10 05/29/18 03:17

Lab Sample ID: LCS 320-223091/2-A

**Matrix: Solid** 

Analysis Batch: 225894

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** Prep Batch: 223091

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	2.00	2.17		ug/Kg		108	76 - 124	
Perfluorooctanoic acid (PFOA)	2.00	2.00		ug/Kg		100	76 - 121	
Perfluorononanoic acid (PFNA)	2.00	2.10		ug/Kg		105	74 - 126	
Perfluorobutanesulfonic acid (PFBS)	1.77	1.90		ug/Kg		108	73 - 142	
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.78		ug/Kg		98	75 - 121	
Perfluorooctanesulfonic acid (PFOS)	1.86	1.95		ug/Kg		105	69 - 131	

100 100

0....

		LCS	LCS	
	Isotope Dilution	%Recovery	Qualifier	Limits
	13C3-PFBS	80		50 - 150
	13C4-PFHpA	89		50 - 150
	13C4 PFOA	91		50 - 150
	13C5 PFNA	94		50 - 150
	18O2 PFHxS	86		50 - 150
	13C4 PFOS	80		50 - 150
Ц				

Lab Sample ID: 320-39023-41 MS Client Sample ID: KLA06-SB2-01

**Analysis Batch: 227681** 

**Matrix: Solid** 

Prep Type: Total/NA Prep Batch: 223091

7 maryolo Batom 227 001	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA)	1.2	J1	3.15	5.16	J1	ug/Kg	<del>\</del>	125	76 - 124
Perfluorooctanoic acid (PFOA)	6.7	J1	3.15	11.5	J1	ug/Kg	₩	151	76 - 121
Perfluorononanoic acid (PFNA)	1.6		3.15	5.14		ug/Kg	₩	113	74 - 126
Perfluorobutanesulfonic acid (PFBS)	0.99		2.79	4.20		ug/Kg	\$	115	73 - 142
Perfluorohexanesulfonic acid (PFHxS)	42	E J1	2.87	56.3	E 4	ug/Kg	₽	512	75 - 121

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

85

69

48 Q

46 Q

Lab Sample ID: 320-39023-41 MS Client Sample ID: KLA06-SB2-01 **Matrix: Solid** Prep Type: Total/NA Prep Batch: 223091 **Analysis Batch: 227681** MS MS Sample Sample Spike %Rec. Result Qualifier Added Result Qualifier Unit D %Rec Limits Analyte 580 E J1 2 92 ug/Kg 69 - 131 Perfluorooctanesulfonic acid 813 E 4 7925 (PFOS) MS MS Isotope Dilution %Recovery Qualifier Limits 13C3-PFBS 88 50 - 150 13C4-PFHpA 82 50 - 150

50 - 150

50 - 150

50 - 150

50 - 150

Lab Sample ID: 320-39023-41 MSD

**Matrix: Solid** 

13C4 PFOA

13C5 PFNA

1802 PFHxS

13C4 PFOS

**Analysis Batch: 227681** 

Client Sample ID: KLA06-SB2-01

Prep Type: Total/NA Prep Batch: 223091

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Perfluoroheptanoic acid (PFHpA)	1.2	J1	3.16	5.65	J1	ug/Kg	<del>\</del>	141	76 - 124	9	30	
Perfluorooctanoic acid (PFOA)	6.7	J1	3.16	13.2	J1	ug/Kg	☼	205	76 - 121	14	30	
Perfluorononanoic acid (PFNA)	1.6		3.16	5.14		ug/Kg	☼	113	74 - 126	0	30	
Perfluorobutanesulfonic acid (PFBS)	0.99		2.79	4.65		ug/Kg	₩	131	73 - 142	10	30	
Perfluorohexanesulfonic acid (PFHxS)	42	E J1	2.87	61.2	E 4	ug/Kg	☼	680	75 - 121	8	30	
Perfluorooctanesulfonic acid	580	E J1	2.93	827	E 4	ug/Kg	₩	8409	69 - 131	2	30	

(PFOS)

(1.00)	MSD	MSD	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	86		50 - 150
13C4-PFHpA	82		50 - 150
13C4 PFOA	83		50 - 150
13C5 PFNA	48	Q	50 - 150
1802 PFHxS	63		50 - 150
13C4 PFOS	45	Q	50 - 150

MB MB

Lab Sample ID: MB 320-223092/1-A

**Matrix: Solid** 

**Analysis Batch: 225899** 

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 223092

Analyte Result Qualifier LOQ DL Unit **Prepared** Analyzed Dil Fac 0.078 ug/Kg Perfluoroheptanoic acid (PFHpA) 0.20 U 0.30 05/14/18 14:03 05/29/18 07:27 Perfluorooctanoic acid (PFOA) 0.20 U 0.30 05/14/18 14:03 05/29/18 07:27 0.10 ug/Kg Perfluorononanoic acid (PFNA) 0.30 0.081 ug/Kg 05/14/18 14:03 05/29/18 07:27 0.20 U 1 Perfluorobutanesulfonic acid (PFBS) 0.18 U 0.40 0.059 ug/Kg 05/14/18 14:03 05/29/18 07:27 Perfluorohexanesulfonic acid (PFHxS) 0.30 0.20 U 0.062 ug/Kg 05/14/18 14:03 05/29/18 07:27 1 Perfluorooctanesulfonic acid (PFOS) 0.50 U 1.0 0.24 ug/Kg 05/14/18 14:03 05/29/18 07:27 MP MP

ı		IVID	IVID				
l	Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
l	13C3-PFBS	68		50 - 150	05/14/18 14:03	05/29/18 07:27	1
l	13C4-PFHpA	71		50 - 150	05/14/18 14:03	05/29/18 07:27	1
	13C4 PFOA	78		50 - 150	05/14/18 14:03	05/29/18 07:27	1

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: MB 320-223092/1-A

**Matrix: Solid** 

Analysis Batch: 225899

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 223092** 

	INID	INID				
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	75		50 - 150	05/14/18 14:03	05/29/18 07:27	1
1802 PFHxS	71		50 - 150	05/14/18 14:03	05/29/18 07:27	1
13C4 PFOS	70		50 - 150	05/14/18 14:03	05/29/18 07:27	1
	13C5 PFNA 18O2 PFHxS	Isotope Dilution         %Recovery           13C5 PFNA         75           18O2 PFHxS         71	13C5 PFNA 75 18O2 PFHxS 71	Isotope Dilution         %Recovery         Qualifier         Limits           13C5 PFNA         75         50 - 150           18O2 PFHxS         71         50 - 150	Isotope Dilution         %Recovery         Qualifier         Limits         Prepared           13C5 PFNA         75         50 - 150         05/14/18 14:03           18O2 PFHxS         71         50 - 150         05/14/18 14:03	Isotope Dilution         %Recovery         Qualifier         Limits         Prepared         Analyzed           13C5 PFNA         75         50 - 150         05/14/18 14:03         05/29/18 07:27           18O2 PFHxS         71         50 - 150         05/14/18 14:03         05/29/18 07:27

Lab Sample ID: LCS 320-223092/2-A

**Matrix: Solid** 

Analysis Batch: 225899

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 223092** 

	Spike	LCS LCS			%Rec.
Analyte	Added	Result Qua	lifier Unit	D %Rec	Limits
Perfluoroheptanoic acid (PFHpA)	2.00	2.34	ug/Kg	117	76 - 124
Perfluorooctanoic acid (PFOA)	2.00	2.27	ug/Kg	113	76 - 121
Perfluorononanoic acid (PFNA)	2.00	2.23	ug/Kg	111	74 - 126
Perfluorobutanesulfonic acid (PFBS)	1.77	2.09	ug/Kg	118	73 - 142
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.95	ug/Kg	107	75 - 121
Perfluorooctanesulfonic acid (PFOS)	1.86	2.11	ug/Kg	114	69 - 131
1.00	1.00				

Limits

50 - 150

LCS LCS Isotope Dilution %Recovery Qualifier 13C3-PFBS 71

50 - 150 73 13C4-PFHpA 50 - 150 13C4 PFOA 79 50 - 150 13C5 PFNA 81 50 - 150 1802 PFHxS 73 50 - 150

71

Lab Sample ID: 320-39023-15 MS

**Matrix: Solid** 

13C4 PFOS

**Analysis Batch: 225899** 

Client Sample ID: KLA02-SB1-01

**Prep Type: Total/NA Prep Batch: 223092** 

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits ₩ Perfluoroheptanoic acid (PFHpA) 0.16 J 2.60 3.00 109 76 - 124 ug/Kg 0.46 M ₩ Perfluorooctanoic acid (PFOA) 2.60 3.13 ug/Kg 102 76 - 121 Perfluorononanoic acid (PFNA) 0.26 U 108 74 - 126 2.60 2.80 ug/Kg 0.25 J 2.30 2.61 103 73 - 142 ug/Kg Perfluorobutanesulfonic acid (PFBS) 2.6 2.37 4.85 ug/Kg 95 75 - 121 Perfluorohexanesulfonic acid (PFHxS) 7.6 J1 2.42 10.2 M ug/Kg 107 69 - 131 Perfluorooctanesulfonic acid (PFOS)

MS	MS

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	77		50 - 150
13C4-PFHpA	83		50 - 150
13C4 PFOA	87		50 - 150
13C5 PFNA	91		50 - 150
18O2 PFHxS	82		50 - 150
13C4 PFOS	80		50 - 150

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-39023-15 MSD

**Matrix: Solid** 

**Analysis Batch: 225899** 

Client Sample ID: KLA02-SB1-01 **Prep Type: Total/NA** 

**Prep Batch: 223092** 

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA)	0.16	J	2.59	2.91	-	ug/Kg	☼	106	76 - 124	3	30
Perfluorooctanoic acid (PFOA)	0.46	M	2.59	2.99		ug/Kg	☼	98	76 - 121	4	30
Perfluorononanoic acid (PFNA)	0.26	U	2.59	2.76		ug/Kg	☼	106	74 - 126	2	30
Perfluorobutanesulfonic acid (PFBS)	0.25	J	2.29	2.75		ug/Kg	₽	109	73 - 142	5	30
Perfluorohexanesulfonic acid (PFHxS)	2.6		2.36	4.92		ug/Kg	☼	98	75 - 121	1	30
Perfluorooctanesulfonic acid (PFOS)	7.6	J1	2.41	8.73	J1	ug/Kg	₽	48	69 - 131	15	30

MSD MSD

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	80		50 - 150
13C4-PFHpA	90		50 - 150
13C4 PFOA	95		50 - 150
13C5 PFNA	96		50 - 150
1802 PFHxS	83		50 - 150
13C4 PFOS	85		50 - 150

Lab Sample ID: MB 320-223346/1-A **Client Sample ID: Method Blank** 

**Matrix: Water** 

**Analysis Batch: 224205** 

Prep Type: Total/NA

Prep Batch: 223346

	MB	MR							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	U	2.0	0.61	ng/L		05/15/18 12:48	05/19/18 04:33	1
Perfluorooctanoic acid (PFOA)	1.5	U M	2.0	0.54	ng/L		05/15/18 12:48	05/19/18 04:33	1
Perfluorononanoic acid (PFNA)	1.5	U	2.0	0.52	ng/L		05/15/18 12:48	05/19/18 04:33	1
Perfluorobutanesulfonic acid (PFBS)	1.0	U	2.0	0.46	ng/L		05/15/18 12:48	05/19/18 04:33	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	U	2.0	0.38	ng/L		05/15/18 12:48	05/19/18 04:33	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.1	ng/L		05/15/18 12:48	05/19/18 04:33	1
	MB	MB							

Isotope Dilution	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	84	50 - 150	05/15/18 12:48	05/19/18 04:33	1
13C4-PFHpA	94	50 - 150	05/15/18 12:48	05/19/18 04:33	1
13C4 PFOA	96	50 - 150	05/15/18 12:48	05/19/18 04:33	1
13C5 PFNA	96	50 - 150	05/15/18 12:48	05/19/18 04:33	1
1802 PFHxS	87	50 - 150	05/15/18 12:48	05/19/18 04:33	1
13C4 PFOS	86	50 - 150	05/15/18 12:48	05/19/18 04:33	1

Lab Sample ID: LCS 320-223346/2-A

**Matrix: Water** 

**Analysis Batch: 224205** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 223346

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	40.0	39.3		ng/L		98	80 - 113	
Perfluorooctanoic acid (PFOA)	40.0	38.0		ng/L		95	80 - 107	
Perfluorononanoic acid (PFNA)	40.0	40.6		ng/L		102	83 - 113	
Perfluorobutanesulfonic acid (PFBS)	35.4	36.7		ng/L		104	87 - 120	
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.1		ng/L		94	81 - 106	

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

MD MD

Lab Sample ID: LCS 320-223346/2-A

Matrix: Water

**Analysis Batch: 224205** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 223346

 Analyte
 Added Perfluorooctanesulfonic acid
 Added Result 37.1
 Qualifier ng/L
 Unit ng/L
 D %Rec Limits ng/L
 Limits 22-112

(PFOS)

	LCS	LCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	82		50 - 150
13C4-PFHpA	94		50 - 150
13C4 PFOA	93		50 - 150
13C5 PFNA	95		50 - 150
18O2 PFHxS	89		50 - 150
13C4 PFOS	83		50 - 150

Lab Sample ID: MB 320-223615/1-A Client Sample ID: Method Blank

**Matrix: Water** 

**Analysis Batch: 225818** 

Prep Type: Total/NA

Prep Batch: 223615

	IVID	IVID							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	U	2.0	0.61	ng/L		05/16/18 14:51	05/28/18 07:23	1
Perfluorooctanoic acid (PFOA)	1.5	UM	2.0	0.54	ng/L		05/16/18 14:51	05/28/18 07:23	1
Perfluorononanoic acid (PFNA)	1.5	U	2.0	0.52	ng/L		05/16/18 14:51	05/28/18 07:23	1
Perfluorobutanesulfonic acid (PFBS)	1.0	U	2.0	0.46	ng/L		05/16/18 14:51	05/28/18 07:23	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	U	2.0	0.38	ng/L		05/16/18 14:51	05/28/18 07:23	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.1	ng/L		05/16/18 14:51	05/28/18 07:23	1
	MB	MB							

		IVID	IVID				
Is	otope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1.	3C3-PFBS	80		50 - 150	05/16/18 14:51	05/28/18 07:23	1
1.	3C4-PFHpA	84		50 - 150	05/16/18 14:51	05/28/18 07:23	1
1.	3C4 PFOA	93		50 - 150	05/16/18 14:51	05/28/18 07:23	1
1.	3C5 PFNA	94		50 - 150	05/16/18 14:51	05/28/18 07:23	1
1	8O2 PFHxS	85		50 - 150	05/16/18 14:51	05/28/18 07:23	1
1.	3C4 PFOS	81		50 - 150	05/16/18 14:51	05/28/18 07:23	1

Lab Sample ID: LCS 320-223615/2-A

**Matrix: Water** 

Analysis Batch: 225818

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 223615

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	40.0	39.6		ng/L		99	80 - 113	
Perfluorooctanoic acid (PFOA)	40.0	35.7		ng/L		89	80 - 107	
Perfluorononanoic acid (PFNA)	40.0	37.6		ng/L		94	83 - 113	
Perfluorobutanesulfonic acid (PFBS)	35.4	36.3		ng/L		103	87 - 120	
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.0		ng/L		96	81 - 106	
Perfluorooctanesulfonic acid (PFOS)	37.1	33.5		ng/L		90	82 - 112	

LCS LCS

Isotope Dilution	%Recovery Qualify	ier Limits
13C3-PFBS	78	50 - 150
13C4-PFHpA	85	50 - 150
13C4 PFOA	90	50 - 150

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-223615/2-A

**Matrix: Water** 

**Analysis Batch: 225818** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 223615** 

,	LCS		
Isotope Dilution	%Recovery	Qualifier	Limits
13C5 PFNA	90		50 - 150
1802 PFHxS	80		50 - 150
13C4 PFOS	86		50 - 150

Lab Sample ID: MB 320-223901/1-A

Matrix: Water

**Analysis Batch: 225690** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 223901** 

	IVID	IVID							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	U	2.0	0.61	ng/L		05/17/18 14:42	05/25/18 22:49	1
Perfluorooctanoic acid (PFOA)	1.5	U	2.0	0.54	ng/L		05/17/18 14:42	05/25/18 22:49	1
Perfluorononanoic acid (PFNA)	1.5	U	2.0	0.52	ng/L		05/17/18 14:42	05/25/18 22:49	1
Perfluorobutanesulfonic acid (PFBS)	1.0	U	2.0	0.46	ng/L		05/17/18 14:42	05/25/18 22:49	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	U	2.0	0.38	ng/L		05/17/18 14:42	05/25/18 22:49	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.1	ng/L		05/17/18 14:42	05/25/18 22:49	1
	MB	MB							
Isotone Dilution	%Recovery	Qualifier	l imits				Prepared	Analyzed	Dil Fac

Isotope Dilution	%Recovery (	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	85		50 - 150	05/17/18 14:42	05/25/18 22:49	1
13C4-PFHpA	86		50 - 150	05/17/18 14:42	05/25/18 22:49	1
13C4 PFOA	88		50 - 150	05/17/18 14:42	05/25/18 22:49	1
13C5 PFNA	92		50 - 150	05/17/18 14:42	05/25/18 22:49	1
1802 PFHxS	83		50 - 150	05/17/18 14:42	05/25/18 22:49	1
13C4 PFOS	82		50 - 150	05/17/18 14:42	05/25/18 22:49	1

Lab Sample ID: LCS 320-223901/2-A

**Matrix: Water** 

**Analysis Batch: 225690** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	40.0	40.1		ng/L		100	80 - 113	
Perfluorooctanoic acid (PFOA)	40.0	38.5		ng/L		96	80 - 107	
Perfluorononanoic acid (PFNA)	40.0	38.3		ng/L		96	83 - 113	
Perfluorobutanesulfonic acid (PFBS)	35.4	34.9		ng/L		99	87 - 120	
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.7		ng/L		98	81 - 106	
Perfluorooctanesulfonic acid (PFOS)	37.1	37.6	М	ng/L		101	82 - 112	

LCS	LCS
-----	-----

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	81		50 - 150
13C4-PFHpA	83		50 - 150
13C4 PFOA	84		50 - 150
13C5 PFNA	84		50 - 150
1802 PFHxS	79		50 - 150
13C4 PFOS	79		50 - 150

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

MB MB

Lab Sample ID: MB 320-224065/1-A

**Matrix: Water** 

**Analysis Batch: 225820** 

**Client Sample ID: Method Blank Prep Type: Total/NA** 

**Prep Batch: 224065** 

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	U	2.0	0.61	ng/L		05/18/18 10:26	05/28/18 11:03	1
Perfluorooctanoic acid (PFOA)	1.5	U	2.0	0.54	ng/L		05/18/18 10:26	05/28/18 11:03	1
Perfluorononanoic acid (PFNA)	1.5	U	2.0	0.52	ng/L		05/18/18 10:26	05/28/18 11:03	1
Perfluorobutanesulfonic acid (PFBS)	1.0	U	2.0	0.46	ng/L		05/18/18 10:26	05/28/18 11:03	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	U	2.0	0.38	ng/L		05/18/18 10:26	05/28/18 11:03	1
Perfluorooctanesulfonic acid (PFOS)	3.0	U	4.0	1.1	ng/L		05/18/18 10:26	05/28/18 11:03	1
	MB	MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	88		50 - 150	05/18/18 10:26	05/28/18 11:03	1
13C4-PFHpA	93		50 - 150	05/18/18 10:26	05/28/18 11:03	1
13C4 PFOA	103		50 - 150	05/18/18 10:26	05/28/18 11:03	1
13C5 PFNA	106		50 - 150	05/18/18 10:26	05/28/18 11:03	1
1802 PFHxS	94		50 - 150	05/18/18 10:26	05/28/18 11:03	1
13C4 PFOS	92		50 - 150	05/18/18 10:26	05/28/18 11:03	1

Lab Sample ID: LCS 320-224065/2-A

**Matrix: Water** 

Analysis Batch: 225820

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 224065** 

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA)	40.0	36.1		ng/L		90	80 - 113
Perfluorooctanoic acid (PFOA)	40.0	35.0		ng/L		88	80 - 107
Perfluorononanoic acid (PFNA)	40.0	36.9		ng/L		92	83 - 113
Perfluorobutanesulfonic acid (PFBS)	35.4	33.5		ng/L		95	87 - 120
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.2		ng/L		86	81 - 106
Perfluorooctanesulfonic acid (PFOS)	37.1	33.8		ng/L		91	82 - 112

	LCS	LCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	66		50 - 150
13C4-PFHpA	70		50 - 150
13C4 PFOA	74		50 - 150
13C5 PFNA	72		50 - 150
1802 PFHxS	70		50 - 150
13C4 PFOS	66		50 - 150

Lab Sample ID: 320-39023-5 MS Client Sample ID: MW-573-03-PRL05-01

**Matrix: Water** 

**Analysis Batch: 225820** 

Prep Type: Total/NA Prep Batch: 224065

7 maryolo Datom 220020	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	4400	E J1	37.2	4240	E 4	ng/L		-309	80 - 113	_
Perfluorooctanoic acid (PFOA)	4700	E J1	37.2	4660	E 4	ng/L		-135	80 - 107	
Perfluorononanoic acid (PFNA)	200	J1	37.2	223	4 M	ng/L		66	83 - 113	
Perfluorobutanesulfonic acid (PFBS)	1900	E J1 M	32.9	1670	E 4 M	ng/L		-546	87 - 120	
Perfluorohexanesulfonic acid (PFHxS)	12000	E J1	33.8	11800	E 4	ng/L		-1361	81 - 106	

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

l	Lab Sample ID: 320-39023-	-5 MS					Clier	nt Sam	ple ID:	MW-573-03-PRL05-01	
l	Matrix: Water									Prep Type: Total/NA	
	Analysis Batch: 225820									Prep Batch: 224065	
	•	Sample	Sample	Spike	MS	MS				%Rec.	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Perfluorooctanesulfonic acid	32000	J1 E M	34.5	32300	E 4	ng/L		1855	82 - 112	
l	(PFOS)										
1		MC	MC								

,	MS	MS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	146		50 - 150
13C4-PFHpA	48	Q	50 - 150
13C4 PFOA	80		50 - 150
13C5 PFNA	62		50 - 150
1802 PFHxS	55		50 - 150
13C4 PFOS	48	Q	50 - 150

Lab Sample ID: 320-39023-5 MSD

**Matrix: Water** 

**Analysis Batch: 225820** 

Client Sample ID: MW-573-03-PRL05-01

Prep Type: Total/NA Prep Batch: 224065

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA)	4400	E J1	38.7	4340	E 4	ng/L		-43	80 - 113	2	30
Perfluorooctanoic acid (PFOA)	4700	E J1	38.7	4690	E 4	ng/L		-45	80 - 107	1	30
Perfluorononanoic acid (PFNA)	200	J1	38.7	229	4 M	ng/L		78	83 - 113	2	30
Perfluorobutanesulfonic acid (PFBS)	1900	E J1 M	34.2	1790	E 4 M	ng/L		-187	87 - 120	7	30
Perfluorohexanesulfonic acid (PFHxS)	12000	E J1	35.2	12000	E 4	ng/L		-912	81 - 106	1	30
Perfluorooctanesulfonic acid (PFOS)	32000	J1 E M	35.9	33600	E 4	ng/L		5571	82 - 112	4	30

 MSD
 MSD

 Isotope Dilution
 %Recovery
 Qualifier
 Limits

 13C3-PFBS
 134
 50-150

 13C4-PFHpA
 45
 Q
 50-150

 13C4 PFOA
 76
 50-150

 13C5 PFNA
 58
 50-150

 13C5 PFNA
 58
 50 - 150

 18O2 PFHxS
 54
 50 - 150

 13C4 PFOS
 45 Q
 50 - 150

Lab Sample ID: MB 320-224254/1-A

Matrix: Solid

Analysis Batch: 226343

Client Sample ID: Method Blank Prep Type: Total/NA

**Prep Batch: 224254** 

-	MB	MB							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.20	U	0.30	0.078	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
Perfluorooctanoic acid (PFOA)	0.20	U M	0.30	0.10	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
Perfluorononanoic acid (PFNA)	0.20	U	0.30	0.081	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
Perfluorobutanesulfonic acid (PFBS)	0.18	U	0.40	0.059	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	U	0.30	0.062	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
Perfluorooctanesulfonic acid (PFOS)	0.50	U	1.0	0.24	ug/Kg		05/19/18 09:21	05/31/18 02:14	1
	MB	MB							

	IND	INID				
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	77		50 - 150	05/19/18 09:21	05/31/18 02:14	1
13C4-PFHpA	85		50 - 150	05/19/18 09:21	05/31/18 02:14	1
13C4 PFOA	91		50 - 150	05/19/18 09:21	05/31/18 02:14	1

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

MB MB

Lab Sample ID: MB 320-224254/1-A

**Matrix: Solid** 

Analysis Batch: 226343

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 224254

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFNA	93		50 - 150	05/19/18 09:21	05/31/18 02:14	1
18O2 PFHxS	85		50 - 150	05/19/18 09:21	05/31/18 02:14	1
13C4 PFOS	84		50 - 150	05/19/18 09:21	05/31/18 02:14	1

Lab Sample ID: LCS 320-224254/2-A

**Matrix: Solid** 

**Analysis Batch: 226343** 

Client Sample ID: Lab Control Sample

**Prep Type: Total/NA** Prep Batch: 224254

_	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier Un	it D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	2.00	1.94	ug/	Kg	97	76 - 124	
Perfluorooctanoic acid (PFOA)	2.00	1.91	ug/	Kg	96	76 - 121	
Perfluorononanoic acid (PFNA)	2.00	2.01	ug/	Kg	100	74 - 126	
Perfluorobutanesulfonic acid (PFBS)	1.77	1.76	ug/	Kg	100	73 - 142	
Perfluorohexanesulfonic acid (PFHxS)	1.82	1.75	ug/	Kg	96	75 - 121	
Perfluorooctanesulfonic acid (PFOS)	1.86	1.83	ug/	Kg	99	69 - 131	
	LCS LCS						

Isotope Dilution %Recovery Qualifier Limits 13C3-PFBS 81 50 - 150 88 50 - 150 13C4-PFHpA 13C4 PFOA 91 50 - 150 13C5 PFNA 91 50 - 150 1802 PFHxS 85 50 - 150 13C4 PFOS 83 50 - 150

Lab Sample ID: 320-39023-59 MS

Matrix: Solid

**Analysis Batch: 226343** 

Client Sample ID: KLA07-SD1-01D **Prep Type: Total/NA** 

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	0.12	J	2.65	2.83		ug/Kg	<del>\</del>	102	76 - 124	
Perfluorooctanoic acid (PFOA)	0.48		2.65	2.74		ug/Kg	≎	85	76 - 121	
Perfluorononanoic acid (PFNA)	0.27	U	2.65	2.54		ug/Kg	≎	96	74 - 126	
Perfluorobutanesulfonic acid (PFBS)	0.20	J	2.34	2.66		ug/Kg	₽	105	73 - 142	
Perfluorohexanesulfonic acid (PFHxS)	2.1		2.41	4.31		ug/Kg	₩	91	75 - 121	
Perfluorooctanesulfonic acid (PFOS)	15	J1	2.46	11.8	4	ug/Kg	☼	-148	69 - 131	

,	MS	MS

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	71		50 - 150
13C4-PFHpA	79		50 - 150
13C4 PFOA	88		50 - 150
13C5 PFNA	95		50 - 150
18O2 PFHxS	76		50 - 150
13C4 PFOS	77		50 - 150

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: 320-39023-59 MSD

Matrix: Solid

**Analysis Batch: 226343** 

Client Sample ID: KLA07-SD1-01D Prep Type: Total/NA

Prep Batch: 224254

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA)	0.12	J	2.68	2.74	·	ug/Kg	☼	98	76 - 124	3	30
Perfluorooctanoic acid (PFOA)	0.48		2.68	2.72		ug/Kg	₽	84	76 - 121	1	30
Perfluorononanoic acid (PFNA)	0.27	U	2.68	2.54		ug/Kg	₽	95	74 - 126	0	30
Perfluorobutanesulfonic acid (PFBS)	0.20	J	2.37	2.49		ug/Kg	₽	97	73 - 142	6	30
Perfluorohexanesulfonic acid (PFHxS)	2.1		2.44	4.14		ug/Kg	₽	84	75 - 121	4	30
Perfluorooctanesulfonic acid (PFOS)	15	J1	2.48	10.1	4	ug/Kg	₽	-213	69 - 131	15	30

MSD MSD

MR MR

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	72		50 - 150
13C4-PFHpA	81		50 - 150
13C4 PFOA	91		50 - 150
13C5 PFNA	94		50 - 150
18O2 PFHxS	77		50 - 150
13C4 PFOS	78		50 - 150

Lab Sample ID: MB 320-224509/1-A Client Sample ID: Method Blank

Matrix: Water Prep Type: Total/NA Analysis Batch: 226349 Prep Batch: 224509

	IVID	IVID							
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.5	U	2.0	0.61	ng/L		05/21/18 11:57	05/31/18 03:56	1
Perfluorooctanoic acid (PFOA)	1.5	U	2.0	0.54	ng/L		05/21/18 11:57	05/31/18 03:56	1
Perfluorononanoic acid (PFNA)	1.5	U	2.0	0.52	ng/L		05/21/18 11:57	05/31/18 03:56	1
Perfluorobutanesulfonic acid (PFBS)	1.0	U	2.0	0.46	ng/L		05/21/18 11:57	05/31/18 03:56	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	U	2.0	0.38	ng/L		05/21/18 11:57	05/31/18 03:56	1
Perfluorooctanesulfonic acid (PFOS)	1.82	J	4.0	1.1	ng/L		05/21/18 11:57	05/31/18 03:56	1

	MB	MB				
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-PFBS	75		50 - 150	05/21/18 11:57	05/31/18 03:56	1
13C4-PFHpA	77		50 - 150	05/21/18 11:57	05/31/18 03:56	1
13C4 PFOA	82		50 - 150	05/21/18 11:57	05/31/18 03:56	1
13C5 PFNA	83		50 - 150	05/21/18 11:57	05/31/18 03:56	1
1802 PFHxS	77		50 - 150	05/21/18 11:57	05/31/18 03:56	1
13C4 PFOS	76		50 - 150	05/21/18 11:57	05/31/18 03:56	1

Lab Sample ID: LCS 320-224509/2-A

**Matrix: Water** 

Analysis Batch: 226349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 224509

•	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluoroheptanoic acid (PFHpA)	40.0	39.5		ng/L		99	80 - 113	
Perfluorooctanoic acid (PFOA)	40.0	37.7		ng/L		94	80 - 107	
Perfluorononanoic acid (PFNA)	40.0	38.6		ng/L		96	83 - 113	
Perfluorobutanesulfonic acid (PFBS)	35.4	34.3		ng/L		97	87 - 120	
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.9		ng/L		93	81 - 106	

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 (Continued)

Lab Sample ID: LCS 320-224509/2-A

Lab Sample ID: LCSD 320-224509/3-A

**Matrix: Water** 

Analysis Batch: 226349

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 224509** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits 34.2 37 1 ng/L 82 - 112 Perfluorooctanesulfonic acid 92

(PFOS)

LCS LCS %Recovery Qualifier Isotope Dilution Limits 13C3-PFBS 80 50 - 150 85 50 - 150 13C4-PFHpA 13C4 PFOA 88 50 - 150 13C5 PFNA 91 50 - 150 1802 PFHxS 82 50 - 150 13C4 PFOS 83 50 - 150

Client Sample ID: Lab Control Sample Dup

**Matrix: Water** 

**Analysis Batch: 226349** 

**Prep Type: Total/NA Prep Batch: 224509** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA)	40.0	38.4		ng/L		96	80 - 113	3	30
Perfluorooctanoic acid (PFOA)	40.0	38.2		ng/L		96	80 - 107	1	30
Perfluorononanoic acid (PFNA)	40.0	40.2		ng/L		101	83 - 113	4	30
Perfluorobutanesulfonic acid (PFBS)	35.4	34.7		ng/L		98	87 - 120	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.1		ng/L		88	81 - 106	5	30
Perfluorooctanesulfonic acid	37.1	32.9		ng/L		89	82 - 112	4	30

(PFOS)

(1.1.00)	LCSD	LCSD	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS	72		50 - 150
13C4-PFHpA	76		50 - 150
13C4 PFOA	81		50 - 150
13C5 PFNA	82		50 - 150
1802 PFHxS	77		50 - 150
13C4 PFOS	76		50 - 150

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL

Lab Sample ID: 320-39023-41 MS

**Matrix: Solid** 

Client Sample ID: KLA06-SB2-01 Prep Type: Total/NA

Analysis Batch: 226044									<b>Prep Batch: 223091</b>
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA) - DL	1.2	D J1	3.15	5.72	D J1	ug/Kg	☼	181	76 - 124
Perfluorooctanoic acid (PFOA) - DL	6.7	D J1	3.15	12.3	D J1	ug/Kg	≎	177	76 - 121
Perfluorononanoic acid (PFNA) - DL	1.6	JD	3.15	5.30	D	ug/Kg	☼	118	74 - 126
Perfluorobutanesulfonic acid (PFBS) - DL	1.0	D J1	2.79	4.25	JD	ug/Kg	₽	116	73 - 142
Perfluorohexanesulfonic acid (PFHxS) - DL	44	D J1	2.87	61.0	D 4	ug/Kg	₽	611	75 - 121

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

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Lab Sample ID: 320-39023-41 MS Client Sample ID: KLA06-SB2-01 **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 226044 Prep Batch: 223091 MS MS Sample Sample Spike %Rec. Result Qualifier Added Result Qualifier Unit D %Rec Limits Analyte 860 E D M J1 2 92 Perfluorooctanesulfonic acid 1140 EDM4 ug/Kg 9468 69 - 131 (PFOS) - DL MS MS Isotope Dilution %Recovery Qualifier Limits 13C3-PFBS - DL 50 - 150 71 13C4-PFHpA - DL 79 50 - 150 13C4 PFOA - DL 81 50 - 150 13C5 PFNA - DL 74 50 - 150 1802 PFHxS - DL 73 50 - 150

50 - 150

Lab Sample ID: 320-39023-41 MSD

Matrix: Solid

13C4 PFOS - DL

Analysis Batch: 226044

Client Sample ID: KLA06-SB2-01

Prep Type: Total/NA Prep Batch: 223091

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA) - DL	1.2	D J1	3.16	6.13	D J1	ug/Kg	<u> </u>	194	76 - 124	7	30
Perfluorooctanoic acid (PFOA) - DL	6.7	D J1	3.16	13.8	D J1	ug/Kg	₽	226	76 - 121	12	30
Perfluorononanoic acid (PFNA) - DL	1.6	JD	3.16	5.39	D	ug/Kg	₩	121	74 - 126	2	30
Perfluorobutanesulfonic acid (PFBS) - DL	1.0	D J1	2.79	5.28	J D J1	ug/Kg	☼	153	73 - 142	22	30
Perfluorohexanesulfonic acid (PFHxS) - DL	44	D J1	2.87	64.1	D 4	ug/Kg	☼	715	75 - 121	5	30
Perfluorooctanesulfonic acid (PFOS) - DL	860	E D M J1	2.93	1170	ED4	ug/Kg	☼	10722	69 - 131	3	30

MSD MSD

Lab Sample ID: 320-39023-5 MS

**Analysis Batch: 226055** 

**Matrix: Water** 

Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS - DL	62		50 - 150
13C4-PFHpA - DL	80		50 - 150
13C4 PFOA - DL	82		50 - 150
13C5 PFNA - DL	73		50 - 150
1802 PFHxS - DL	72		50 - 150
13C4 PFOS - DL	61		50 - 150

Client Sample ID: MW-573-03-PRL05-01

Prep Type: Total/NA Prep Batch: 224065

Sample Sample **Spike** MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit Limits %Rec 37.2 5100 J1 D 5430 4 D 80 - 113 Perfluoroheptanoic acid (PFHpA) ng/L 920 6700 J1 D 37.2 6130 4 D -1548 80 - 107 Perfluorooctanoic acid (PFOA) ng/L 225 4 D Perfluorononanoic acid (PFNA) -190 J1 D M 37 2 ng/L 89 83 - 113 3900 J1 D 3890 4 D 329 -129 87 - 120 Perfluorobutanesulfonic acid ng/L (PFBS) - DL 39000 E J1 D 33.8 35400 E 4 D ng/L -9248 81 - 106 Perfluorohexanesulfonic acid (PFHxS) - DL

TestAmerica Job ID: 320-39023-1 Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL (Continued)

Lab Sample ID: 320-39023-5 MS Client Sample ID: MW-573-03-PRL05-01 **Matrix: Water** Prep Type: Total/NA Analysis Batch: 226055 Prep Batch: 224065

Spike MS MS Sample Sample %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits 34.5 63000 J1 E D 72300 E 4 D 82 - 112 Perfluorooctanesulfonic acid ng/L 25660

(PFOS) - DL

()	MS	MS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS - DL	107	М	50 - 150
13C4-PFHpA - DL	64		50 - 150
13C4 PFOA - DL	86		50 - 150
13C5 PFNA - DL	71		50 - 150
1802 PFHxS - DL	82		50 - 150
13C4 PFOS - DL	61		50 - 150

Lab Sample ID: 320-39023-5 MSD

**Matrix: Water** 

**Analysis Batch: 226055** 

Client Sample ID: MW-573-03-PRL05-01

Prep Type: Total/NA Prep Batch: 224065

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA) - DL	5100	J1 D	38.7	4770	4 D	ng/L		-833	80 - 113	13	30
Perfluorooctanoic acid (PFOA) - DL	6700	J1 D	38.7	6400	4 D	ng/L		-782	80 - 107	4	30
Perfluorononanoic acid (PFNA) - DL	190	J1 D M	38.7	241	4 D M	ng/L		128	83 - 113	7	30
Perfluorobutanesulfonic acid (PFBS) - DL	3900	J1 D	34.2	3640	4 D	ng/L		-862	87 - 120	7	30
Perfluorohexanesulfonic acid (PFHxS) - DL	39000	E J1 D	35.2	36500	E 4 D	ng/L		-5657	81 - 106	3	30
Perfluorooctanesulfonic acid (PFOS) - DL	63000	J1 E D	35.9	68600	E 4 D	ng/L		14331	82 - 112	5	30

Limits

MSD MSD Isotope Dilution %Recovery Qualifier 13C3-PFBS - DL 107 M

50 - 150 13C4-PFHpA - DL 65 50 - 150 13C4 PFOA - DL 76 50 - 150 72 13C5 PFNA - DL 50 - 150

1802 PFHxS - DL 76 50 - 150 13C4 PFOS - DL 64 50 - 150

#### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL2

Lab Sample ID: 320-39023-41 MS Client Sample ID: KLA06-SB2-01 **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 226044 Pren Batch: 223091

Analysis Batch. 220044	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA) - DL2	32	U	3.15	32	U	ug/Kg	₩	NC	76 - 124
Perfluorooctanoic acid (PFOA) - DL2	32	U	3.15	32	U M	ug/Kg	₽	NC	76 - 121
Perfluorononanoic acid (PFNA) - DL2	32	U	3.15	32	UM	ug/Kg	₽	NC	74 - 126

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Method: EPA 537 (Mod) - PFAS for QSM 5.1, Table B-15 - DL2 (Continued)

Lab Sample ID: 320-39023 Matrix: Solid Analysis Batch: 226044							Clie	nt Sam	ple ID: KLA06-SB2-01 Prep Type: Total/NA Prep Batch: 223091
	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluorobutanesulfonic acid (PFBS) - DL2	29	U	2.79	28	U	ug/Kg	<del>\</del>	NC	73 - 142
Perfluorohexanesulfonic acid (PFHxS) - DL2	39	D J1	2.87	58.6	D 4	ug/Kg	₩	682	75 - 121
Perfluorooctanesulfonic acid (PFOS) - DL2	960	D M J1	2.92	1200	D M 4	ug/Kg	₩	8375	69 - 131
	MS	MS							
Isotope Dilution	%Recovery	Qualifier	Limits						
13C3-PFBS - DL2	44	M Q	50 - 150						
13C4-PFHpA - DL2	71		50 - 150						
13C4 PFOA - DL2	77		50 - 150						
13C5 PFNA - DL2	73		50 - 150						
1802 PFHxS - DL2	65		50 - 150						
13C4 PFOS - DL2	66		50 - 150						

Lab Sample ID: 320-39023-41 MSD

**Matrix: Solid** 

Analysis Batch: 226044									Prep Ba	atch: 22	23091
, , , , , , , , , , , , , , , , , , , ,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA) - DL2	32	U	3.16	32	U	ug/Kg	<u>∓</u>	NC	76 - 124	NC	30
Perfluorooctanoic acid (PFOA) - DL2	32	U	3.16	16.3	JD	ug/Kg	☼	NC	76 - 121	NC	30
Perfluorononanoic acid (PFNA) - DL2	32	U	3.16	32	U	ug/Kg	☼	NC	74 - 126	NC	30
Perfluorobutanesulfonic acid (PFBS) - DL2	29	U	2.79	28	U	ug/Kg	⊅	NC	73 - 142	NC	30
Perfluorohexanesulfonic acid (PFHxS) - DL2	39	D J1	2.87	60.5	D 4	ug/Kg	₽	747	75 - 121	3	30
Perfluorooctanesulfonic acid (PFOS) - DL2	960	D M J1	2.93	1230	D M 4	ug/Kg	☼	9131	69 - 131	2	30
` '	MSD	MSD									

	MSD	MSD	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3-PFBS - DL2	76	M	50 - 150
13C4-PFHpA - DL2	76		50 - 150
13C4 PFOA - DL2	81		50 - 150
13C5 PFNA - DL2	75		50 - 150
18O2 PFHxS - DL2	66		50 - 150
13C4 PFOS - DL2	71		50 - 150
_			

Client Sample ID: KLA06-SB2-01

**Prep Type: Total/NA** 

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

#### GC/MS VOA

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-57	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	1311	
LB 280-415139/1-A	Method Blank	TCLP	Solid	1311	
LCS 280-415139/2-A	Lab Control Sample	TCLP	Solid	1311	

#### Leach Batch: 415294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-58	IDW-KINGSLEY-WA-LDOS01	TCLP	Water	1311	
LB3 280-415294/1-A	Method Blank	TCLP	Water	1311	
LCS 280-415294/2-A	Lab Control Sample	TCLP	Water	1311	

#### **Analysis Batch: 415557**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-58	IDW-KINGSLEY-WA-LDOS01	TCLP	Water	8260B	415294
LB3 280-415294/1-A	Method Blank	TCLP	Water	8260B	415294
LCS 280-415294/2-A	Lab Control Sample	TCLP	Water	8260B	415294

#### **Analysis Batch: 416517**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-57	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	8260B	415139
LB 280-415139/1-A	Method Blank	TCLP	Solid	8260B	415139
LCS 280-415139/2-A	Lab Control Sample	TCLP	Solid	8260B	415139

#### **GC/MS Semi VOA**

#### Leach Batch: 415138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-57	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	1311	
LB 280-415138/1-C	Method Blank	TCLP	Solid	1311	
LCS 280-415138/2-C	Lab Control Sample	TCLP	Solid	1311	
320-39023-57 MS	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	1311	
320-39023-57 MSD	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	1311	

#### Leach Batch: 415275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-58	IDW-KINGSLEY-WA-LDOS01	TCLP	Water	1311	

#### **Prep Batch: 415600**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-57	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	3510C	415138
LB 280-415138/1-C	Method Blank	TCLP	Solid	3510C	415138
LCS 280-415138/2-C	Lab Control Sample	TCLP	Solid	3510C	415138
320-39023-57 MS	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	3510C	415138
320-39023-57 MSD	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	3510C	415138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-58	IDW-KINGSLEY-WA-LDOS01	TCLP	Water	3510C	415275
LB3 280-416023/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-416023/2-A	Lab Control Sample	Total/NA	Water	3510C	

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### GC/MS Semi VOA (Continued)

### **Analysis Batch: 416357**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-57	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	8270D	415600
320-39023-58	IDW-KINGSLEY-WA-LDOS01	TCLP	Water	8270D	416023
LB 280-415138/1-C	Method Blank	TCLP	Solid	8270D	415600
LB3 280-416023/1-A	Method Blank	Total/NA	Water	8270D	416023
LCS 280-415138/2-C	Lab Control Sample	TCLP	Solid	8270D	415600
LCS 280-416023/2-A	Lab Control Sample	Total/NA	Water	8270D	416023
320-39023-57 MS	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	8270D	415600
320-39023-57 MSD	IDW-KINGSLEY-SO-LDOS01	TCLP	Solid	8270D	415600

### LCMS

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-9 - DL	KLA-01-SB1-01	Total/NA	Solid	SHAKE	
320-39023-9	KLA-01-SB1-01	Total/NA	Solid	SHAKE	
320-39023-10	KLA-01-SB1-02	Total/NA	Solid	SHAKE	
320-39023-10 - DL	KLA-01-SB1-02	Total/NA	Solid	SHAKE	
320-39023-11	KLA-01-SB2-01	Total/NA	Solid	SHAKE	
320-39023-12	KLA-01-SB2-02	Total/NA	Solid	SHAKE	
320-39023-13	KLA-01-SB3-01	Total/NA	Solid	SHAKE	
320-39023-14	KLA-01-SB3-02	Total/NA	Solid	SHAKE	
320-39023-21	KLA03-SB1-01	Total/NA	Solid	SHAKE	
320-39023-22	KLA03-SB1-02	Total/NA	Solid	SHAKE	
320-39023-23	KLA03-SB2-01	Total/NA	Solid	SHAKE	
320-39023-24	KLA03-SB2-02	Total/NA	Solid	SHAKE	
320-39023-25	KLA03-SB3-01	Total/NA	Solid	SHAKE	
320-39023-26	KLA03-SB3-02	Total/NA	Solid	SHAKE	
320-39023-39	KLA06-SB1-01	Total/NA	Solid	SHAKE	
320-39023-39 - DL	KLA06-SB1-01	Total/NA	Solid	SHAKE	
320-39023-40 - DL	KLA06-SB1-02	Total/NA	Solid	SHAKE	
320-39023-40	KLA06-SB1-02	Total/NA	Solid	SHAKE	
320-39023-41	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 - DL	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 - DL2	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-42 - DL2	KLA06-SB2-02	Total/NA	Solid	SHAKE	
320-39023-42 - DL	KLA06-SB2-02	Total/NA	Solid	SHAKE	
320-39023-42	KLA06-SB2-02	Total/NA	Solid	SHAKE	
320-39023-43	KLA07-SD1-01	Total/NA	Solid	SHAKE	
320-39023-51	KLA03-SB-2-01D	Total/NA	Solid	SHAKE	
320-39023-52	KLA06-SB-2-02D	Total/NA	Solid	SHAKE	
320-39023-52 - DL	KLA06-SB-2-02D	Total/NA	Solid	SHAKE	
320-39023-52 - DL2	KLA06-SB-2-02D	Total/NA	Solid	SHAKE	
320-39023-55 - DL	KLA05-SB1-01D	Total/NA	Solid	SHAKE	
320-39023-55	KLA05-SB1-01D	Total/NA	Solid	SHAKE	
MB 320-223091/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-223091/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-39023-41 MS - DL2	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 MS - DL	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 MS	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 MSD - DL2	KLA06-SB2-01	Total/NA	Solid	SHAKE	

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

## LCMS (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-41 MSD - DL	KLA06-SB2-01	Total/NA	Solid	SHAKE	
320-39023-41 MSD	KLA06-SB2-01	Total/NA	Solid	SHAKE	

#### **Prep Batch: 223092**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-15	KLA02-SB1-01	Total/NA	Solid	SHAKE	
320-39023-16	KLA02-SB1-02	Total/NA	Solid	SHAKE	
320-39023-17 - DL	KLA02-SB2-01	Total/NA	Solid	SHAKE	
320-39023-17	KLA02-SB2-01	Total/NA	Solid	SHAKE	
320-39023-18	KLA02-SB2-02	Total/NA	Solid	SHAKE	
320-39023-18 - DL	KLA02-SB2-02	Total/NA	Solid	SHAKE	
320-39023-19 - DL	KLA02-SB3-01	Total/NA	Solid	SHAKE	
320-39023-19	KLA02-SB3-01	Total/NA	Solid	SHAKE	
320-39023-20	KLA02-SB3-02	Total/NA	Solid	SHAKE	
320-39023-27 - DL	KLA04-SB1-01	Total/NA	Solid	SHAKE	
320-39023-27	KLA04-SB1-01	Total/NA	Solid	SHAKE	
320-39023-28 - DL	KLA04-SB1-02	Total/NA	Solid	SHAKE	
320-39023-28 - DL2	KLA04-SB1-02	Total/NA	Solid	SHAKE	
320-39023-28	KLA04-SB1-02	Total/NA	Solid	SHAKE	
320-39023-29 - DL	KLA04-SB2-01	Total/NA	Solid	SHAKE	
320-39023-29	KLA04-SB2-01	Total/NA	Solid	SHAKE	
320-39023-30 - DL	KLA04-SB2-02	Total/NA	Solid	SHAKE	
320-39023-30	KLA04-SB2-02	Total/NA	Solid	SHAKE	
320-39023-31	KLA04-SB3-01	Total/NA	Solid	SHAKE	
320-39023-31 - DL2	KLA04-SB3-01	Total/NA	Solid	SHAKE	
320-39023-31 - DL	KLA04-SB3-01	Total/NA	Solid	SHAKE	
320-39023-32 - DL	KLA04-SB3-02	Total/NA	Solid	SHAKE	
320-39023-32	KLA04-SB3-02	Total/NA	Solid	SHAKE	
320-39023-32 - DL2	KLA04-SB3-02	Total/NA	Solid	SHAKE	
320-39023-33	KLA05-SB1-01	Total/NA	Solid	SHAKE	
320-39023-33 - DL	KLA05-SB1-01	Total/NA	Solid	SHAKE	
320-39023-34	KLA05-SB1-02	Total/NA	Solid	SHAKE	
320-39023-35 - DL	KLA05-SB2-01	Total/NA	Solid	SHAKE	
320-39023-35	KLA05-SB2-01	Total/NA	Solid	SHAKE	
320-39023-36 - DL	KLA05-SB2-02	Total/NA	Solid	SHAKE	
320-39023-36	KLA05-SB2-02	Total/NA	Solid	SHAKE	
320-39023-37 - DL	KLA05-SB3-01	Total/NA	Solid	SHAKE	
320-39023-37	KLA05-SB3-01	Total/NA	Solid	SHAKE	
320-39023-38	KLA05-SB3-02	Total/NA	Solid	SHAKE	
320-39023-38 - DL	KLA05-SB3-02	Total/NA	Solid	SHAKE	
320-39023-53 - DL	KLA02-SB2-02D	Total/NA	Solid	SHAKE	
320-39023-53	KLA02-SB2-02D	Total/NA	Solid	SHAKE	
320-39023-54	KLA02-SB1-02D	Total/NA	Solid	SHAKE	
MB 320-223092/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-223092/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-39023-15 MS	KLA02-SB1-01	Total/NA	Solid	SHAKE	
320-39023-15 MSD	KLA02-SB1-01	Total/NA	Solid	SHAKE	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-44	ER-01	Total/NA	Water	3535	

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

### LCMS (Continued)

Prep E	Batch:	223346 (	(Continued)
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-45	FB-01	Total/NA	Water	3535	
MB 320-223346/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-223346/2-A	Lab Control Sample	Total/NA	Water	3535	

#### **Prep Batch: 223615**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-46	ER-02	Total/NA	Water	3535	<u> </u>
MB 320-223615/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-223615/2-A	Lab Control Sample	Total/NA	Water	3535	

#### **Prep Batch: 223901**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-47	ER-03	Total/NA	Water	3535	
320-39023-48	ER-04	Total/NA	Water	3535	
MB 320-223901/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-223901/2-A	Lab Control Sample	Total/NA	Water	3535	

#### Prep Batch: 224065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-1 - DL	MW-KLA01-01-01	Total/NA	Water	3535	
320-39023-1	MW-KLA01-01-01	Total/NA	Water	3535	
320-39023-2 - DL	MW-KLA02-01-01	Total/NA	Water	3535	
320-39023-2	MW-KLA02-01-01	Total/NA	Water	3535	
320-39023-3	MW-KLA03-01-01	Total/NA	Water	3535	
320-39023-3 - DL	MW-KLA03-01-01	Total/NA	Water	3535	
320-39023-4 - DL	MW-KLA04-01-01	Total/NA	Water	3535	
320-39023-4	MW-KLA04-01-01	Total/NA	Water	3535	
320-39023-5 - DL	MW-573-03-PRL05-01	Total/NA	Water	3535	
320-39023-5	MW-573-03-PRL05-01	Total/NA	Water	3535	
320-39023-6 - DL	MW-572-02-PRL05-01	Total/NA	Water	3535	
320-39023-6	MW-572-02-PRL05-01	Total/NA	Water	3535	
320-39023-7 - DL2	MW-KLA06-01-01	Total/NA	Water	3535	
320-39023-7	MW-KLA06-01-01	Total/NA	Water	3535	
320-39023-49	MW-572-02-PRL05-01D	Total/NA	Water	3535	
320-39023-49 - DL	MW-572-02-PRL05-01D	Total/NA	Water	3535	
320-39023-56	ER-05	Total/NA	Water	3535	
MB 320-224065/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-224065/2-A	Lab Control Sample	Total/NA	Water	3535	
320-39023-5 MS	MW-573-03-PRL05-01	Total/NA	Water	3535	
320-39023-5 MS - DL	MW-573-03-PRL05-01	Total/NA	Water	3535	
320-39023-5 MSD - DL	MW-573-03-PRL05-01	Total/NA	Water	3535	
320-39023-5 MSD	MW-573-03-PRL05-01	Total/NA	Water	3535	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-45	FB-01	Total/NA	Water	EPA 537 (Mod)	223346
MB 320-223346/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	223346
LCS 320-223346/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	223346

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

### LCMS (Continued)

Prep	Batch:	224254
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-59	KLA07-SD1-01D	Total/NA	Solid	SHAKE	
MB 320-224254/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 320-224254/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
320-39023-59 MS	KLA07-SD1-01D	Total/NA	Solid	SHAKE	
320-39023-59 MSD	KLA07-SD1-01D	Total/NA	Solid	SHAKE	

### **Prep Batch: 224509**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-8	KLA08-SW1-01	Total/NA	Water	3535	
MB 320-224509/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-224509/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-224509/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

#### **Analysis Batch: 224542**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-44	ER-01	Total/NA	Water	EPA 537 (Mod)	223346

#### **Analysis Batch: 225690**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-47	ER-03	Total/NA	Water	EPA 537 (Mod)	223901
320-39023-48	ER-04	Total/NA	Water	EPA 537 (Mod)	223901
MB 320-223901/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	223901
LCS 320-223901/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	223901

#### **Analysis Batch: 225818**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-46	ER-02	Total/NA	Water	EPA 537 (Mod)	223615
MB 320-223615/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	223615
LCS 320-223615/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	223615

#### **Analysis Batch: 225820**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-1	MW-KLA01-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-2	MW-KLA02-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-3	MW-KLA03-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-6	MW-572-02-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-7	MW-KLA06-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-49	MW-572-02-PRL05-01D	Total/NA	Water	EPA 537 (Mod)	224065
MB 320-224065/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	224065
LCS 320-224065/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5 MS	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5 MSD	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065

### Analysis Batch: 225894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-9	KLA-01-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-10	KLA-01-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-11	KLA-01-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-12	KLA-01-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-13	KLA-01-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223091

QC ASSOCIATION Summi

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### LCMS (Continued)

#### **Analysis Batch: 225894 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-14	KLA-01-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-21	KLA03-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-22	KLA03-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223091
MB 320-223091/1-A	Method Blank	Total/NA	Solid	EPA 537 (Mod)	223091
LCS 320-223091/2-A	Lab Control Sample	Total/NA	Solid	EPA 537 (Mod)	223091

#### Analysis Batch: 225899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-15	KLA02-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-16	KLA02-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-17	KLA02-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-18	KLA02-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-19	KLA02-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-20	KLA02-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-27	KLA04-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-28	KLA04-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-29	KLA04-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-30	KLA04-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-31	KLA04-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-32	KLA04-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-33	KLA05-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-35	KLA05-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-36	KLA05-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-37	KLA05-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-38	KLA05-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-53	KLA02-SB2-02D	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-54	KLA02-SB1-02D	Total/NA	Solid	EPA 537 (Mod)	223092
MB 320-223092/1-A	Method Blank	Total/NA	Solid	EPA 537 (Mod)	223092
LCS 320-223092/2-A	Lab Control Sample	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-15 MS	KLA02-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-15 MSD	KLA02-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-9 - DL	KLA-01-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-10 - DL	KLA-01-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-39 - DL	KLA06-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-40 - DL	KLA06-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 - DL2	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 - DL	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-42 - DL2	KLA06-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-42 - DL	KLA06-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-52 - DL2	KLA06-SB-2-02D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-52 - DL	KLA06-SB-2-02D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-55 - DL	KLA05-SB1-01D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MS - DL2	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MS - DL	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MSD - DL2	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MSD - DL	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091

QC ASSOCIATION Summa

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### LCMS (Continued)

#### **Analysis Batch: 226051**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-17 - DL	KLA02-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-18 - DL	KLA02-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-19 - DL	KLA02-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-27 - DL	KLA04-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-28 - DL2	KLA04-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-28 - DL	KLA04-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-29 - DL	KLA04-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-30 - DL	KLA04-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-31 - DL2	KLA04-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-31 - DL	KLA04-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-32 - DL2	KLA04-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-32 - DL	KLA04-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-33 - DL	KLA05-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-34	KLA05-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-35 - DL	KLA05-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-36 - DL	KLA05-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-37 - DL	KLA05-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-38 - DL	KLA05-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223092
320-39023-53 - DL	KLA02-SB2-02D	Total/NA	Solid	EPA 537 (Mod)	223092

#### **Analysis Batch: 226055**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-1 - DL	MW-KLA01-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-2 - DL	MW-KLA02-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-3 - DL	MW-KLA03-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-4 - DL	MW-KLA04-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-4	MW-KLA04-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5 - DL	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-6 - DL	MW-572-02-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-7 - DL2	MW-KLA06-01-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-49 - DL	MW-572-02-PRL05-01D	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-56	ER-05	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5 MS - DL	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065
320-39023-5 MSD - DL	MW-573-03-PRL05-01	Total/NA	Water	EPA 537 (Mod)	224065

#### **Analysis Batch: 226343**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-59	KLA07-SD1-01D	Total/NA	Solid	EPA 537 (Mod)	224254
MB 320-224254/1-A	Method Blank	Total/NA	Solid	EPA 537 (Mod)	224254
LCS 320-224254/2-A	Lab Control Sample	Total/NA	Solid	EPA 537 (Mod)	224254
320-39023-59 MS	KLA07-SD1-01D	Total/NA	Solid	EPA 537 (Mod)	224254
320-39023-59 MSD	KLA07-SD1-01D	Total/NA	Solid	EPA 537 (Mod)	224254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-8	KLA08-SW1-01	Total/NA	Water	EPA 537 (Mod)	224509
MB 320-224509/1-A	Method Blank	Total/NA	Water	EPA 537 (Mod)	224509
LCS 320-224509/2-A	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	224509
LCSD 320-224509/3-A	Lab Control Sample Dup	Total/NA	Water	EPA 537 (Mod)	224509

QO ASSOCIATION SUMMA

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### LCMS (Continued)

#### Analysis Batch: 227681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-23	KLA03-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-24	KLA03-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-25	KLA03-SB3-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-26	KLA03-SB3-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-39	KLA06-SB1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-40	KLA06-SB1-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-42	KLA06-SB2-02	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-43	KLA07-SD1-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-51	KLA03-SB-2-01D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-52	KLA06-SB-2-02D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-55	KLA05-SB1-01D	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MS	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091
320-39023-41 MSD	KLA06-SB2-01	Total/NA	Solid	EPA 537 (Mod)	223091

## **General Chemistry**

### Analysis Batch: 223303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-21	KLA03-SB1-01	Total/NA	Solid	D 2216	
320-39023-22	KLA03-SB1-02	Total/NA	Solid	D 2216	
320-39023-25	KLA03-SB3-01	Total/NA	Solid	D 2216	
320-39023-26	KLA03-SB3-02	Total/NA	Solid	D 2216	
320-39023-39	KLA06-SB1-01	Total/NA	Solid	D 2216	
320-39023-40	KLA06-SB1-02	Total/NA	Solid	D 2216	
320-39023-41	KLA06-SB2-01	Total/NA	Solid	D 2216	
320-39023-42	KLA06-SB2-02	Total/NA	Solid	D 2216	
320-39023-52	KLA06-SB-2-02D	Total/NA	Solid	D 2216	
320-39023-41 DU	KLA06-SB2-01	Total/NA	Solid	D 2216	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-9	KLA-01-SB1-01	Total/NA	Solid	D 2216	
320-39023-10	KLA-01-SB1-02	Total/NA	Solid	D 2216	
320-39023-11	KLA-01-SB2-01	Total/NA	Solid	D 2216	
320-39023-12	KLA-01-SB2-02	Total/NA	Solid	D 2216	
320-39023-13	KLA-01-SB3-01	Total/NA	Solid	D 2216	
320-39023-14	KLA-01-SB3-02	Total/NA	Solid	D 2216	
320-39023-15	KLA02-SB1-01	Total/NA	Solid	D 2216	
320-39023-16	KLA02-SB1-02	Total/NA	Solid	D 2216	
320-39023-17	KLA02-SB2-01	Total/NA	Solid	D 2216	
320-39023-18	KLA02-SB2-02	Total/NA	Solid	D 2216	
320-39023-19	KLA02-SB3-01	Total/NA	Solid	D 2216	
320-39023-20	KLA02-SB3-02	Total/NA	Solid	D 2216	
320-39023-23	KLA03-SB2-01	Total/NA	Solid	D 2216	
320-39023-24	KLA03-SB2-02	Total/NA	Solid	D 2216	
320-39023-27	KLA04-SB1-01	Total/NA	Solid	D 2216	
320-39023-28	KLA04-SB1-02	Total/NA	Solid	D 2216	
320-39023-29	KLA04-SB2-01	Total/NA	Solid	D 2216	
320-39023-30	KLA04-SB2-02	Total/NA	Solid	D 2216	

QC Association Summa

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

## **General Chemistry (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-31	KLA04-SB3-01	Total/NA	Solid	D 2216	
320-39023-9 DU	KLA-01-SB1-01	Total/NA	Solid	D 2216	

#### **Analysis Batch: 223408**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-32	KLA04-SB3-02	Total/NA	Solid	D 2216	
320-39023-33	KLA05-SB1-01	Total/NA	Solid	D 2216	
320-39023-34	KLA05-SB1-02	Total/NA	Solid	D 2216	
320-39023-35	KLA05-SB2-01	Total/NA	Solid	D 2216	
320-39023-36	KLA05-SB2-02	Total/NA	Solid	D 2216	
320-39023-37	KLA05-SB3-01	Total/NA	Solid	D 2216	
320-39023-38	KLA05-SB3-02	Total/NA	Solid	D 2216	
320-39023-43	KLA07-SD1-01	Total/NA	Solid	D 2216	
320-39023-51	KLA03-SB-2-01D	Total/NA	Solid	D 2216	
320-39023-53	KLA02-SB2-02D	Total/NA	Solid	D 2216	
320-39023-54	KLA02-SB1-02D	Total/NA	Solid	D 2216	
320-39023-55	KLA05-SB1-01D	Total/NA	Solid	D 2216	
320-39023-32 DU	KLA04-SB3-02	Total/NA	Solid	D 2216	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-39023-59	KLA07-SD1-01D	Total/NA	Solid	D 2216	

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: MW-KLA01-01-01

Lab Sample ID: 320-39023-1 Date Collected: 05/06/18 14:50 **Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 11:18	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	5	226055	05/29/18 18:41	S1M	TAL SAC

Client Sample ID: MW-KLA02-01-01

Lab Sample ID: 320-39023-2 Date Collected: 05/06/18 12:05

**Matrix: Water** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 11:26	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226055	05/29/18 18:49	S1M	TAL SAC

Client Sample ID: MW-KLA03-01-01

Lab Sample ID: 320-39023-3 Date Collected: 05/06/18 15:55

**Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 11:34	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	50	226055	05/29/18 19:04	S1M	TAL SAC

Client Sample ID: MW-KLA04-01-01

Lab Sample ID: 320-39023-4

Date Collected: 05/06/18 14:15 **Matrix: Water** Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	5	226055	05/29/18 19:12	S1M	TAL SAC
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	226055	05/29/18 19:20	S1M	TAL SAC

Client Sample ID: MW-573-03-PRL05-01

Date Collected: 05/06/18 09:15 **Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 11:50	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC

TestAmerica Sacramento

Lab Sample ID: 320-39023-5

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

Client Sample ID: MW-573-03-PRL05-01

Lab Sample ID: 320-39023-5 Date Collected: 05/06/18 09:15

**Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226055	05/29/18 19:28	S1M	TAL SAC

Client Sample ID: MW-572-02-PRL05-01

Lab Sample ID: 320-39023-6 Date Collected: 05/06/18 10:30

**Matrix: Water** 

Date Received: 05/08/18 09:00

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 12:13	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226055	05/29/18 20:07	S1M	TAL SAC

Client Sample ID: MW-KLA06-01-01

Lab Sample ID: 320-39023-7 Date Collected: 05/06/18 13:15

**Matrix: Water** 

Date Received: 05/08/18 09:00

		Batch	Batch		Dilution	Batch	Prepared		
F	Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Ī	otal/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
1	otal/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 12:29	S1M	TAL SAC
T	otal/NA	Prep	3535	DL2		224065	05/18/18 10:26	SK	TAL SAC
Т	otal/NA	Analysis	EPA 537 (Mod)	DL2	100	226055	05/29/18 20:31	S1M	TAL SAC

Client Sample ID: KLA08-SW1-01

Lab Sample ID: 320-39023-8 Date Collected: 05/07/18 08:30

**Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224509	05/21/18 12:01	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	226349	05/31/18 04:51	JRB	TAL SAC

Client Sample ID: KLA-01-SB1-01 Lab Sample ID: 320-39023-9

Date Collected: 05/02/18 14:00 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA-01-SB1-01

Date Collected: 05/02/18 14:00

Lab Sample ID: 320-39023-9 **Matrix: Solid** 

TestAmerica Job ID: 320-39023-1

Date Received: 05/09/18 09:20 Percent Solids: 79.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 03:32	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226044	05/29/18 11:07	S1M	TAL SAC

Client Sample ID: KLA-01-SB1-02

Date Collected: 05/02/18 14:10 Date Received: 05/09/18 09:20

**Matrix: Solid** 

Batch Batch Dilution Batch Prepared Method or Analyzed Analyst **Prep Type** Type Run **Factor** Number Total/NA Analysis D 2216 223400 05/15/18 16:20 JCB TAL SAC

Client Sample ID: KLA-01-SB1-02

Date Collected: 05/02/18 14:10 Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-10

Lab Sample ID: 320-39023-10

**Matrix: Solid** Percent Solids: 77.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 03:40	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226044	05/29/18 11:15	S1M	TAL SAC

Client Sample ID: KLA-01-SB2-01

Date Collected: 05/02/18 13:15

Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-11

**Matrix: Solid** 

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA-01-SB2-01

Date Collected: 05/02/18 13:15

Lab Sample ID: 320-39023-11

**Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 87.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 03:48	S1M	TAL SAC

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA-01-SB2-02

Lab Sample ID: 320-39023-12 Date Collected: 05/02/18 13:20

**Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216			223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA-01-SB2-02

Lab Sample ID: 320-39023-12 Date Collected: 05/02/18 13:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 75.7

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 03:56	S1M	TAL SAC

Client Sample ID: KLA-01-SB3-01

Lab Sample ID: 320-39023-13 Date Collected: 05/02/18 14:25 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA-01-SB3-01

Lab Sample ID: 320-39023-13 Date Collected: 05/02/18 14:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 04:04	S1M	TAL SAC

Client Sample ID: KLA-01-SB3-02

Lab Sample ID: 320-39023-14 Date Collected: 05/02/18 14:30 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA-01-SB3-02

Date Collected: 05/02/18 14:30 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.1

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225894	05/29/18 04:12	S1M	TAL SAC

Lab Sample ID: 320-39023-14

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Date Received: 05/09/18 09:20

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA02-SB1-01

Lab Sample ID: 320-39023-15 Date Collected: 05/04/18 13:40

**Matrix: Solid** 

Batch Batch Dilution Batch Prepared Method

Run **Factor** Number or Analyzed **Prep Type** Type Analyst Lab Total/NA D 2216 223400 05/15/18 16:20 **JCB** TAL SAC Analysis

Client Sample ID: KLA02-SB1-01

Lab Sample ID: 320-39023-15 Date Collected: 05/04/18 13:40 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 77.4

**Batch Batch** Dilution Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep SHAKE 223092 05/14/18 14:03 HJA TAL SAC Total/NA Analysis EPA 537 (Mod) 225899 05/29/18 07:43 S<sub>1</sub>M TAL SAC

Client Sample ID: KLA02-SB1-02

Lab Sample ID: 320-39023-16 Date Collected: 05/04/18 13:45 **Matrix: Solid** 

Date Received: 05/09/18 09:20

Batch Dilution Batch Ratch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab TAL SAC Total/NA Analysis D 2216 223400 05/15/18 16:20 JCB

Client Sample ID: KLA02-SB1-02

Date Collected: 05/04/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 80.8

**Batch** Dilution **Batch Batch Prepared** Type Method Number or Analyzed **Prep Type** Run Factor Analyst I ah Total/NA Prep SHAKE 223092 05/14/18 14:03 HJA TAL SAC Total/NA Analysis EPA 537 (Mod) 1 225899 05/29/18 08:07 S1M TAL SAC

Client Sample ID: KLA02-SB2-01

Lab Sample ID: 320-39023-17 Date Collected: 05/04/18 13:20 **Matrix: Solid** 

Date Received: 05/09/18 09:20

**Batch** Batch Dilution Batch **Prepared** Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA D 2216 223400 05/15/18 16:20 JCB TAL SAC Analysis

Client Sample ID: KLA02-SB2-01

Date Collected: 05/04/18 13:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 08:14	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 15:02	D1R	TAL SAC

Lab Sample ID: 320-39023-16

Lab Sample ID: 320-39023-17

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA02-SB2-02 Lab Sample ID: 320-39023-18

Date Collected: 05/04/18 13:25

**Matrix: Solid** 

TestAmerica Job ID: 320-39023-1

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA02-SB2-02

Lab Sample ID: 320-39023-18 Date Collected: 05/04/18 13:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 59.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 08:22	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	FPA 537 (Mod)	DI	20	226051	05/29/18 17:07	D1R	TAL SAC

Client Sample ID: KLA02-SB3-01

Lab Sample ID: 320-39023-19 Date Collected: 05/04/18 13:55 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA02-SB3-01

Lab Sample ID: 320-39023-19 Date Collected: 05/04/18 13:55 **Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 83.8

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 08:30	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 14:30	D1R	TAL SAC

Client Sample ID: KLA02-SB3-02

Lab Sample ID: 320-39023-20

Date Collected: 05/04/18 14:00 **Matrix: Solid** Date Received: 05/09/18 09:20

Batch Batch Dilution Batch **Prepared** Method Run Factor Number Lab

**Prep Type** Type or Analyzed Analyst Total/NA Analysis D 2216 223400 05/15/18 16:20 JCB TAL SAC

Client Sample ID: KLA02-SB3-02 Lab Sample ID: 320-39023-20

Date Collected: 05/04/18 14:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 72.4

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep SHAKE 223092 05/14/18 14:03 HJA TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA02-SB3-02

Date Collected: 05/04/18 14:00

Lab Sample ID: 320-39023-20 Matrix: Solid

Date Received: 05/09/18 09:20 Percent Solids: 72.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 08:38	S1M	TAL SAC

Client Sample ID: KLA03-SB1-01

Date Collected: 05/01/18 09:00 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-21

Matrix: Solid

Dilution Batch Batch **Batch Prepared** or Analyzed **Prep Type** Type Method Run **Factor** Number Analyst Lab Total/NA D 2216 223303 05/15/18 13:00 TCS TAL SAC Analysis

Client Sample ID: KLA03-SB1-01

Date Collected: 05/01/18 09:00 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-21

Matrix: Solid Percent Solids: 77.7

Batch **Batch** Dilution **Batch Prepared** Method Factor Number or Analyzed **Prep Type** Type Run Analyst Lab 223091 TAL SAC Total/NA Prep SHAKE 05/14/18 13:10 HJA Total/NA Analysis EPA 537 (Mod) 225894 05/29/18 04:19 S1M TAL SAC 1

Client Sample ID: KLA03-SB1-02

Date Collected: 05/01/18 09:05

Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-22

Matrix: Solid

Dilution Batch **Batch Batch Prepared** Method Run Factor Number or Analyzed **Prep Type** Type Analyst Lah D 2216 223303 05/15/18 13:00 TCS TAL SAC Total/NA Analysis

Client Sample ID: KLA03-SB1-02

Date Collected: 05/01/18 09:05

Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-22

Matrix: Solid Percent Solids: 74.7

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep SHAKE 223091 05/14/18 13:10 HJA TAL SAC

1

225894

05/29/18 04:27

S<sub>1</sub>M

Client Sample ID: KLA03-SB2-01

Analysis

EPA 537 (Mod)

Date Collected: 05/02/18 12:15 Date Received: 05/09/18 09:20

Total/NA

Lab Sample ID: 320-39023-23

TAL SAC

**Matrix: Solid** 

**Batch** Batch Dilution **Batch Prepared Prep Type** Type Method Run Factor Number or Analyzed Analyst Lab TAL SAC Total/NA Analysis D 2216 223400 05/15/18 16:20 JCB

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA03-SB2-01

Date Collected: 05/02/18 12:15 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-23

Matrix: Solid

Percent Solids: 81.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 22:47	S1M	TAL SAC

Client Sample ID: KLA03-SB2-02

Date Collected: 05/02/18 12:20 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-24

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA03-SB2-02

Date Collected: 05/02/18 12:20 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-24

Matrix: Solid Percent Solids: 77.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 22:55	S1M	TAL SAC

Client Sample ID: KLA03-SB3-01

Date Collected: 05/01/18 08:45 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-25

Matrix: Solid

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run **Factor** Number or Analyzed Analyst Total/NA Analysis D 2216 223303 05/15/18 13:00 TCS TAL SAC

Client Sample ID: KLA03-SB3-01

Date Collected: 05/01/18 08:45 Date Received: 05/09/18 09:20 Lab Sample ID: 320-39023-25

Lab Sample ID: 320-39023-26

Matrix: Solid

Percent Solids: 74.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 23:03	S1M	TAL SAC

Client Sample ID: KLA03-SB3-02

Date Collected: 05/01/18 08:50

8:50 Matrix: Solid

Date Received: 05/09/18 09:20

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223303	05/15/18 13:00	TCS	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Date Collected: 05/01/18 08:50

Date Received: 05/09/18 09:20

Client Sample ID: KLA03-SB3-02

Lab Sample ID: 320-39023-26

**Matrix: Solid** 

TestAmerica Job ID: 320-39023-1

Percent Solids: 73.6

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 23:10	S1M	TAL SAC

Client Sample ID: KLA04-SB1-01

Lab Sample ID: 320-39023-27 Date Collected: 05/04/18 08:35 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA04-SB1-01

Lab Sample ID: 320-39023-27 Date Collected: 05/04/18 08:35 **Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 72.6

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 08:54	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 15:33	D1R	TAL SAC

Client Sample ID: KLA04-SB1-02

Lab Sample ID: 320-39023-28 Date Collected: 05/04/18 08:40 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA04-SB1-02 Lab Sample ID: 320-39023-28

Date Collected: 05/04/18 08:40 **Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 77.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:02	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL2		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226051	05/29/18 15:41	D1R	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 17:15	D1R	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Lab Sample ID: 320-39023-29

Client Sample ID: KLA04-SB2-01

Date Collected: 05/04/18 08:20

Date Received: 05/09/18 09:20

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA04-SB2-01

Lab Sample ID: 320-39023-29 Date Collected: 05/04/18 08:20 **Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 78.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:09	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 15:49	D1R	TAL SAC

Client Sample ID: KLA04-SB2-02

Lab Sample ID: 320-39023-30 Date Collected: 05/04/18 08:25 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA04-SB2-02

Lab Sample ID: 320-39023-30 Date Collected: 05/04/18 08:25 **Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 76.0

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:17	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 15:57	D1R	TAL SAC

Client Sample ID: KLA04-SB3-01

Lab Sample ID: 320-39023-31

Date Collected: 05/04/18 08:05 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223400	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA04-SB3-01

Lab Sample ID: 320-39023-31

Date Collected: 05/04/18 08:05 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

**Matrix: Solid** 

**Matrix: Solid** 

Client Sample ID: KLA04-SB3-01 Lab Sample ID: 320-39023-31

Date Collected: 05/04/18 08:05

Matrix: Solid

Date Received: 05/09/18 09:20 Percent Solids: 78.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:25	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL2		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226051	05/29/18 16:12	D1R	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 17:23	D1R	TAL SAC

Client Sample ID: KLA04-SB3-02 Lab Sample ID: 320-39023-32

Date Collected: 05/04/18 08:10 Date Received: 05/09/18 09:20

Batch Batch Dilution **Batch Prepared** Method **Factor** Number or Analyzed **Prep Type** Type Run Analyst Lab Total/NA D 2216 223408 05/15/18 16:20 JCB TAL SAC Analysis

Client Sample ID: KLA04-SB3-02 Lab Sample ID: 320-39023-32

 Date Collected: 05/04/18 08:10
 Matrix: Solid

 Date Received: 05/09/18 09:20
 Percent Solids: 65.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:33	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL2		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226051	05/29/18 16:20	D1R	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 17:31	D1R	TAL SAC

Client Sample ID: KLA05-SB1-01 Lab Sample ID: 320-39023-33

Date Collected: 05/05/18 09:00 Date Received: 05/09/18 09:20

Batch Batch Dilution Batch Prepared

Prep Type Type Method Run Factor Number or Analyzed Analyst Lab

Total/NA Analysis D 2216

Total/NA T

Total/NA Analysis D 2216 1 223408 05/15/18 16:20 JCB TAL SAC

Client Sample ID: KLA05-SB1-01

Date Collected: 05/05/18 09:00

Matrix: Solid

Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-33

Matrix: Solid

Percent Solids: 79.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:41	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 14:38	D1R	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA05-SB1-02

Lab Sample ID: 320-39023-34 Date Collected: 05/05/18 09:10

**Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223408	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA05-SB1-02

Lab Sample ID: 320-39023-34 Date Collected: 05/05/18 09:10 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.5

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	226051	05/29/18 14:15	D1R	TAL SAC

Client Sample ID: KLA05-SB2-01

Lab Sample ID: 320-39023-35 Date Collected: 05/05/18 09:30 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223408	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA05-SB2-01

Lab Sample ID: 320-39023-35 Date Collected: 05/05/18 09:30 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 85.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 09:56	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226051	05/29/18 14:46	D1R	TAL SAC

Lab Sample ID: 320-39023-36 Client Sample ID: KLA05-SB2-02

Date Collected: 05/05/18 09:40 Date Received: 05/09/18 09:20

**Batch** Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab 223408 05/15/18 16:20 JCB TAL SAC Total/NA Analysis D 2216

Client Sample ID: KLA05-SB2-02

Lab Sample ID: 320-39023-36 Date Collected: 05/05/18 09:40 Matrix: Solid

Date Received: 05/09/18 09:20 Percent Solids: 75.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 10:04	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC

**Matrix: Solid** 

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA05-SB2-02

Date Collected: 05/05/18 09:40 Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-36

**Matrix: Solid** 

Percent Solids: 75.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226051	05/29/18 14:54	D1R	TAL SAC

Client Sample ID: KLA05-SB3-01

Date Collected: 05/05/18 10:10 Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-37

**Matrix: Solid** 

**Matrix: Solid** 

Matriv Solid

Dilution **Batch** Batch Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA D 2216 223408 05/15/18 16:20 JCB TAL SAC Analysis

Client Sample ID: KLA05-SB3-01

Date Collected: 05/05/18 10:10 Date Received: 05/09/18 09:20

Lab Sample ID: 320-39023-37

Lab Sample ID: 320-39023-38

Lab Sample ID: 320-39023-38

Lab Sample ID: 320-39023-39

TAL SAC

Percent Solids: 83.8

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 10:20	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 16:28	D1R	TAL SAC

Client Sample ID: KLA05-SB3-02

Date Collected: 05/05/18 10:20

Da

ate Collected. 03/03/10 10.20	Matrix. Solid
ate Received: 05/09/18 09:20	

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223408	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA05-SB3-02

Date Collected: 05/05/18 10:20

**Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 80.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 10:28	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226051	05/29/18 16:44	D1R	TAL SAC

Client Sample ID: KLA06-SB1-01

Analysis

D 2216

Date Collected: 05/01/18 14:15

D

Total/NA

Date Received: (	05/09/18 09	9:20						
	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab

223303 05/15/18 13:00 TCS

Matrix: Solid

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA06-SB1-01 Lab Sample ID: 320-39023-39 Date Collected: 05/01/18 14:15

**Matrix: Solid** 

Date Received: 05/09/18 09:20 Percent Solids: 73.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226044	05/29/18 11:30	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 23:18	S1M	TAL SAC

Client Sample ID: KLA06-SB1-02

Lab Sample ID: 320-39023-40 Date Collected: 05/01/18 14:20 **Matrix: Solid** 

Date Received: 05/09/18 09:20

Batch Batch Dilution Batch Prepared Method Number or Analyzed Analyst **Prep Type** Type Run **Factor** Total/NA Analysis D 2216 223303 05/15/18 13:00 TCS TAL SAC

Client Sample ID: KLA06-SB1-02 Lab Sample ID: 320-39023-40

Date Collected: 05/01/18 14:20 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 79.6

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226044	05/29/18 11:38	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 23:26	S1M	TAL SAC

Client Sample ID: KLA06-SB2-01 Lab Sample ID: 320-39023-41

Date Collected: 05/01/18 13:45 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223303	05/15/18 13:00	TCS	TAL SAC

Lab Sample ID: 320-39023-41 Client Sample ID: KLA06-SB2-01

Date Collected: 05/01/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 63.5

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL2		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226044	05/29/18 12:02	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226044	05/29/18 12:49	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/06/18 23:34	S1M	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Client Sample ID: KLA06-SB2-02 Lab Sample ID: 320-39023-42

Date Collected: 05/01/18 13:50

**Matrix: Solid** 

TestAmerica Job ID: 320-39023-1

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223303	05/15/18 13:00	TCS	TAL SAC

Client Sample ID: KLA06-SB2-02

Lab Sample ID: 320-39023-42

Date Collected: 05/01/18 13:50 Date Received: 05/09/18 09:20

**Matrix: Solid** Percent Solids: 70.3

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL2		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226044	05/29/18 12:25	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226044	05/29/18 13:28	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/07/18 00:13	S1M	TAL SAC

Client Sample ID: KLA07-SD1-01

Lab Sample ID: 320-39023-43

**Matrix: Solid** 

Date Collected: 05/06/18 11:30 Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223408	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA07-SD1-01

Lab Sample ID: 320-39023-43

Date Collected: 05/06/18 11:30 Date Received: 05/09/18 09:20

**Matrix: Solid** Percent Solids: 92.9

Batch Dilution Batch Batch Prepared Type Method Number or Analyzed Analyst **Prep Type** Run **Factor** Lab Total/NA Prep SHAKE 223091 05/14/18 13:10 HJA TAL SAC Total/NA Analysis 227681 06/07/18 00:52 S1M TAL SAC EPA 537 (Mod) 1

Client Sample ID: ER-01

Lab Sample ID: 320-39023-44

**Matrix: Water** 

Date Collected: 05/01/18 15:30 Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			223346	05/15/18 12:48	TWL	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	224542	05/21/18 14:03	JRB	TAL SAC

Client: Leidos, Inc.

Total/NA

Project/Site: Phase III, ANG-Kingsley

Prep

Analysis

Client Sample ID: FB-01 Lab Sample ID: 320-39023-45

Date Collected: 05/01/18 15:50 **Matrix: Water** Date Received: 05/09/18 09:20

Batch Batch Dilution Batch **Prepared** Type Method Run Factor or Analyzed Analyst **Prep Type** Number Lab Total/NA 3535 05/15/18 12:48 TWL TAL SAC

Client Sample ID: ER-02 Lab Sample ID: 320-39023-46

1

223346

224205 05/19/18 06:46 S1M

Date Collected: 05/02/18 09:40 **Matrix: Water** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			223615	05/16/18 14:51	AME	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225818	05/28/18 09:29	D1R	TAL SAC

Client Sample ID: ER-03 Lab Sample ID: 320-39023-47

Date Collected: 05/03/18 10:30 **Matrix: Water** 

Date Received: 05/08/18 09:00

EPA 537 (Mod)

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			223901	05/17/18 14:42	AME	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225690	05/25/18 23:59	JRB	TAL SAC

Client Sample ID: ER-04 Lab Sample ID: 320-39023-48

Date Collected: 05/04/18 11:00 Date Received: 05/09/18 09:20

**Batch Batch** Dilution **Batch Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep 3535 223901 05/17/18 14:42 AME TAL SAC Total/NA Analysis 225690 05/26/18 00:15 JRB TAL SAC EPA 537 (Mod) 1

Client Sample ID: MW-572-02-PRL05-01D Lab Sample ID: 320-39023-49

Date Collected: 05/06/18 10:30 **Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225820	05/28/18 12:37	S1M	TAL SAC
Total/NA	Prep	3535	DL		224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226055	05/29/18 20:54	S1M	TAL SAC

Client Sample ID: KLA03-SB-2-01D Lab Sample ID: 320-39023-51

Date Collected: 05/02/18 12:15 **Matrix: Solid** Date Received: 05/09/18 09:20

**Batch** Batch Dilution **Batch Prepared** Method **Prep Type** Run **Factor** Number or Analyzed Type Analyst Lab D 2216 223408 05/15/18 16:20 TAL SAC Total/NA Analysis JCB

TestAmerica Sacramento

**Matrix: Water** 

TestAmerica Job ID: 320-39023-1

TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA03-SB-2-01D Lab Sample ID: 320-39023-51

Date Collected: 05/02/18 12:15 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 78.6

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/07/18 01:00	S1M	TAL SAC

Client Sample ID: KLA06-SB-2-02D

Lab Sample ID: 320-39023-52 Date Collected: 05/01/18 13:50 **Matrix: Solid** 

Date Received: 05/09/18 09:20

Γ		Batch	Batch		Dilution	Batch	Prepared		
1	Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
=	Total/NA	Analysis	D 2216		1	223303	05/15/18 13:00	TCS	TAL SAC

Client Sample ID: KLA06-SB-2-02D Lab Sample ID: 320-39023-52

Date Collected: 05/01/18 13:50 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 67.8

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL2		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL2	100	226044	05/29/18 12:33	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	10	226044	05/29/18 13:36	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/07/18 00:21	S1M	TAL SAC

Client Sample ID: KLA02-SB2-02D Lab Sample ID: 320-39023-53

Date Collected: 05/04/18 13:25 **Matrix: Solid** 

Date Received: 05/09/18 09:20

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	223408	05/15/18 16:20	JCB	TAL SAC

Client Sample ID: KLA02-SB2-02D Lab Sample ID: 320-39023-53

Date Collected: 05/04/18 13:25 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 59.1

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	225899	05/29/18 10:36	S1M	TAL SAC
Total/NA	Prep	SHAKE	DL		223092	05/14/18 14:03	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	20	226051	05/29/18 17:38	D1R	TAL SAC

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

Lab Sample ID: 320-39023-55

TestAmerica Job ID: 320-39023-1

Client Sample ID: KLA02-SB1-02D

Lab Sample ID: 320-39023-54 Date Collected: 05/04/18 13:45

**Matrix: Solid** 

Date Received: 05/09/18 09:20 Batch Batch Dilution Batch

Prepared Method Run **Factor** Number or Analyzed **Prep Type** Type Analyst Lab Total/NA D 2216 223408 05/15/18 16:20 **JCB** TAL SAC Analysis

Lab Sample ID: 320-39023-54 Client Sample ID: KLA02-SB1-02D

Date Collected: 05/04/18 13:45 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 75.9

**Batch** Batch Dilution Batch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep SHAKE 223092 05/14/18 14:03 HJA TAL SAC Total/NA Analysis EPA 537 (Mod) 225899 05/29/18 10:43 S1M TAL SAC

Client Sample ID: KLA05-SB1-01D

Lab Sample ID: 320-39023-55 Date Collected: 05/05/18 09:00 **Matrix: Solid** 

Date Received: 05/09/18 09:20

Batch Dilution Batch Ratch **Prepared Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab TAL SAC Total/NA Analysis D 2216 223408 05/15/18 16:20 JCB

Client Sample ID: KLA05-SB1-01D

Date Collected: 05/05/18 09:00 **Matrix: Solid** Date Received: 05/09/18 09:20 Percent Solids: 82.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE	DL		223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)	DL	100	226044	05/29/18 12:41	S1M	TAL SAC
Total/NA	Prep	SHAKE			223091	05/14/18 13:10	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	227681	06/07/18 00:29	S1M	TAL SAC

Client Sample ID: ER-05 Lab Sample ID: 320-39023-56

Date Collected: 05/06/18 16:00

Date Received: 05/08/18 09:00

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	3535			224065	05/18/18 10:26	SK	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	226055	05/29/18 21:18	S1M	TAL SAC

Lab Sample ID: 320-39023-57 Client Sample ID: IDW-KINGSLEY-SO-LDOS01

Date Collected: 05/07/18 09:45 **Matrix: Solid** Date Received: 05/08/18 09:00

**Batch Batch** Dilution **Batch Prepared** Method Number **Prep Type** Type Run Factor or Analyzed Analyst Lab TCLP Leach 1311 415139 05/16/18 16:32 DFB1 TAL DEN **TCLP** Analysis 8260B 1 416517 05/29/18 15:26 TAW TAL DEN

**Matrix: Water** 

Client: Leidos, Inc. TestAmerica Job ID: 320-39023-1 Project/Site: Phase III, ANG-Kingsley

Client Sample ID: IDW-KINGSLEY-SO-LDOS01

Lab Sample ID: 320-39023-57

Date Collected: 05/07/18 09:45 **Matrix: Solid** Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			415138	05/16/18 16:32	DFB1	TAL DEN
TCLP	Prep	3510C			415600	05/21/18 08:55		TAL DEN
TCLP	Analysis	8270D		1	416357	05/25/18 21:36	AFH	TAL DEN

Client Sample ID: IDW-KINGSLEY-WA-LDOS01

Lab Sample ID: 320-39023-58 Date Collected: 05/07/18 09:30 **Matrix: Water** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
TCLP	Leach	1311			415294	05/17/18 17:42	DFB1	TAL DEN
TCLP	Analysis	8260B		1	415557	05/21/18 17:50	TAW	TAL DEN
TCLP	Leach	1311			415275	05/17/18 12:00	DFB1	TAL DEN
TCLP	Prep	3510C			416023	05/21/18 08:46		TAL DEN
TCLP	Analysis	8270D		1	416357	05/25/18 20:46	AFH	TAL DEN

Client Sample ID: KLA07-SD1-01D

Lab Sample ID: 320-39023-59 Date Collected: 05/06/18 11:30 **Matrix: Solid** 

Date Received: 05/08/18 09:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	224540	05/21/18 15:33	JCB	TAL SAC

Client Sample ID: KLA07-SD1-01D

Lab Sample ID: 320-39023-59 Date Collected: 05/06/18 11:30 **Matrix: Solid** Date Received: 05/08/18 09:00 Percent Solids: 73.7

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	SHAKE			224254	05/19/18 09:21	HJA	TAL SAC
Total/NA	Analysis	EPA 537 (Mod)		1	226343	05/31/18 02:30	JRB	TAL SAC

### **Laboratory References:**

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

### **Accreditation/Certification Summary**

Client: Leidos, Inc.

TestAmerica Job ID: 320-39023-1

Project/Site: Phase III, ANG-Kingsley

### Laboratory: TestAmerica Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program		EPA Region	Identification Number	Expiration Date
Oregon	NELAP		10	4040	01-29-19
Analysis Method	Prep Method	Matrix	Analyt	te.	

### **Laboratory: TestAmerica Denver**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19
A2LA	ISO/IEC 17025		2907.01	10-31-19
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	01-08-19
Arizona	State Program	9	AZ0713	12-20-18
Arkansas DEQ	State Program	6	88-0687	06-01-18 *
California	State Program	9	2513	01-18-19
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-18
Georgia	State Program	4	N/A	01-08-19 *
Illinois	NELAP	5	200017	04-30-18 *
Iowa	State Program	7	370	12-01-18
Kansas	NELAP	7	E-10166	05-31-18 *
Louisiana	NELAP	6	02096	06-30-18
Maine	State Program	1	CO0002	03-03-19
Minnesota	NELAP	5	8-999-405	12-31-18
Nevada	State Program	9	CO0026	07-31-18
New Hampshire	NELAP	1	205310	04-28-19
New Jersey	NELAP	2	CO004	06-30-18
New York	NELAP	2	11964	04-01-19
North Carolina (WW/SW)	State Program	4	358	12-31-18
North Dakota	State Program	8	R-034	01-08-19
Oklahoma	State Program	6	8614	08-31-18
Oregon	NELAP	10	4025	01-08-19
Pennsylvania	NELAP	3	68-00664	07-31-18
South Carolina	State Program	4	72002001	01-08-19
Texas	NELAP	6	T104704183-17-14	09-30-18
USDA	Federal			03-26-21
Utah	NELAP	8	CO00026	07-31-18
Virginia	NELAP	3	460232	06-14-18
Washington	State Program	10	C583	08-03-18
West Virginia DEP	State Program	3	354	12-31-18
Wisconsin	State Program	5	999615430	08-31-18
Wyoming (UST)	A2LA	8	2907.01	10-31-19

<sup>\*</sup> Accreditation/Certification renewal pending - accreditation/certification considered valid.

### **Method Summary**

Client: Leidos, Inc.

Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
EPA 537 (Mod)	PFAS for QSM 5.1, Table B-15	DOD 5.1	TAL SAC
D 2216	Percent Moisture	ASTM	TAL SAC
1311	TCLP Extraction	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
5030B	Purge and Trap	SW846	TAL DEN
SHAKE	Shake Extraction with Ultrasonic Bath Extraction	SW846	TAL SAC

### **Protocol References:**

ASTM = ASTM International

DOD 5.1 = Department of Defense Quality Systems Manual V5.1

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### **Laboratory References:**

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

### Sample Summary

Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-39023-1	MW-KLA01-01-01	Water	05/06/18 14:50	05/08/18 09:00
320-39023-2	MW-KLA02-01-01	Water	05/06/18 12:05	05/09/18 09:20
320-39023-3	MW-KLA03-01-01	Water	05/06/18 15:55	05/08/18 09:00
320-39023-4	MW-KLA04-01-01	Water	05/06/18 14:15	05/08/18 09:00
320-39023-5	MW-573-03-PRL05-01	Water	05/06/18 09:15	05/08/18 09:00
320-39023-6	MW-572-02-PRL05-01	Water	05/06/18 10:30	05/08/18 09:00
320-39023-7	MW-KLA06-01-01	Water	05/06/18 13:15	05/08/18 09:00
320-39023-8	KLA08-SW1-01	Water	05/07/18 08:30	05/08/18 09:00
320-39023-9	KLA-01-SB1-01	Solid	05/02/18 14:00	05/09/18 09:20
320-39023-10	KLA-01-SB1-02	Solid	05/02/18 14:10	05/09/18 09:20
320-39023-11	KLA-01-SB2-01	Solid	05/02/18 13:15	05/09/18 09:20
320-39023-12	KLA-01-SB2-02	Solid	05/02/18 13:20	05/09/18 09:20
320-39023-13	KLA-01-SB3-01	Solid	05/02/18 14:25	05/09/18 09:20
320-39023-14	KLA-01-SB3-02	Solid	05/02/18 14:30	05/09/18 09:20
320-39023-15	KLA02-SB1-01	Solid	05/04/18 13:40	05/09/18 09:20
320-39023-16	KLA02-SB1-02	Solid	05/04/18 13:45	05/09/18 09:20
320-39023-17	KLA02-SB2-01	Solid	05/04/18 13:20	05/09/18 09:20
320-39023-18	KLA02-SB2-02	Solid	05/04/18 13:25	05/09/18 09:20
320-39023-19	KLA02-SB3-01	Solid	05/04/18 13:55	05/09/18 09:20
320-39023-20	KLA02-SB3-02	Solid	05/04/18 14:00	05/09/18 09:20
320-39023-21	KLA03-SB1-01	Solid	05/01/18 09:00	05/09/18 09:20
320-39023-22	KLA03-SB1-02	Solid	05/01/18 09:05	05/09/18 09:20
320-39023-23	KLA03-SB2-01	Solid	05/02/18 12:15	05/09/18 09:20
320-39023-24	KLA03-SB2-02	Solid	05/02/18 12:20	05/09/18 09:20
320-39023-25	KLA03-SB3-01	Solid	05/01/18 08:45	05/09/18 09:20
320-39023-26	KLA03-SB3-02	Solid	05/01/18 08:50	05/09/18 09:20
320-39023-27	KLA04-SB1-01	Solid	05/04/18 08:35	05/09/18 09:20
320-39023-28	KLA04-SB1-02	Solid	05/04/18 08:40	05/09/18 09:20
320-39023-29	KLA04-SB2-01	Solid	05/04/18 08:20	05/09/18 09:20
320-39023-30	KLA04-SB2-02	Solid	05/04/18 08:25	05/09/18 09:20
320-39023-31	KLA04-SB3-01	Solid	05/04/18 08:05	05/09/18 09:20
320-39023-32	KLA04-SB3-02	Solid	05/04/18 08:10	05/09/18 09:20
320-39023-33	KLA05-SB1-01	Solid	05/05/18 09:00	05/09/18 09:20
320-39023-34	KLA05-SB1-02	Solid	05/05/18 09:10	05/09/18 09:20
320-39023-35	KLA05-SB2-01	Solid	05/05/18 09:30	05/09/18 09:20
320-39023-36	KLA05-SB2-02	Solid	05/05/18 09:40	05/09/18 09:20
320-39023-37	KLA05-SB3-01	Solid	05/05/18 10:10	05/09/18 09:20
320-39023-38	KLA05-SB3-02	Solid	05/05/18 10:20	05/09/18 09:20
320-39023-39	KLA06-SB1-01	Solid	05/01/18 14:15	05/09/18 09:20
320-39023-40	KLA06-SB1-02	Solid	05/01/18 14:20	05/09/18 09:20
320-39023-41	KLA06-SB2-01	Solid	05/01/18 13:45	05/09/18 09:20
320-39023-42	KLA06-SB2-02	Solid	05/01/18 13:50	05/09/18 09:20
320-39023-43	KLA07-SD1-01	Solid	05/06/18 11:30	05/09/18 09:20
320-39023-44	ER-01	Water	05/01/18 15:30	05/09/18 09:20
320-39023-45	FB-01	Water	05/01/18 15:50	05/09/18 09:20
320-39023-46	ER-02	Water	05/02/18 09:40	05/09/18 09:20
320-39023-47	ER-03	Water	05/03/18 10:30	05/08/18 09:00
320-39023-48	ER-04	Water	05/04/18 11:00	05/09/18 09:20
320-39023-49	MW-572-02-PRL05-01D	Water	05/06/18 10:30	05/08/18 09:00
320-39023-51	KLA03-SB-2-01D	Solid		05/09/18 09:20
320-39023-52	KLA06-SB-2-02D	Solid		05/09/18 09:20
320-39023-53	KLA02-SB2-02D	Solid		05/09/18 09:20
320-39023-54	KLA02-SB1-02D	Solid	05/04/18 13:45	

### Sample Summary

Client: Leidos, Inc. Project/Site: Phase III, ANG-Kingsley

TestAmerica Job ID: 320-39023-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received
320-39023-55	KLA05-SB1-01D	Solid	05/05/18 09:00 05/09/18 09:20
320-39023-56	ER-05	Water	05/06/18 16:00 05/08/18 09:00
320-39023-57	IDW-KINGSLEY-SO-LDOS01	Solid	05/07/18 09:45 05/08/18 09:00
320-39023-58	IDW-KINGSLEY-WA-LDOS01	Water	05/07/18 09:30 05/08/18 09:00
320-39023-59	KLA07-SD1-01D	Solid	05/06/18 11:30 05/08/18 09:00

05/16/18 08:05

hannigana

Invalid Compound ID

Perfluorononanoic acid (PFNA)

Lab Name: TestAmerica Sacramento	Job No.: 32	320-39023-1	I		
SDG No.:					
Instrument ID: A8_N	Analysis Ba	Batch Number: 224205			
Lab Sample ID: CCB 320-224205/1	Client Samp	Sample ID:			
Date Analyzed: 05/19/18 04:10	Lab File II	Lab File ID: 2018.05.18LLC_004.d	GC Colum	GC Column: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluoroheptanoic acid (PFHpA)	2.33   Basel	eline	mongkols	05/20/18 11:37	
Lab Sample ID: CCVL 320-224205/2	Client Sample	ole ID:			
Date Analyzed: 05/19/18 04:17	Lab File II	Lab File ID: 2018.05.18LLC_005.d	GC Colum	GC Column: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	3.06 Base	eline	mongkols	05/20/18 11:39	
Lab Sample ID: MB 320-223346/1-A	Client Sample	ole ID:			
Date Analyzed: 05/19/18 04:33	Lab File ID	Lab File ID: 2018.05.18LLC_026.d	GC Colum	GC Column: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	Inve	Invalid Compound ID	westendor fc	05/19/18 12:07	

Lab Name: TestAmerica Sacramento	Job No	Job No.: 320-39023-1			
SDG No.:					
Instrument ID: A8_N	Analys	Analysis Batch Number: 224461			
Lab Sample ID: CCB 320-224461/1	Client	Client Sample ID:			
Date Analyzed: 05/21/18 09:54	Lab Fi	Lab File ID: 2018.05.21LLQCA_003.d	GC Colum	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	barnettj	05/21/18 15:26	
Lab Sample ID: CCVL 320-224461/2	Client	Client Sample ID:			
Date Analyzed: 05/21/18 10:02	Lab Fi	Lab File ID: 2018.05.21LLQCA_004.d	GC Columi	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION		
	TIME	REASON	ANALYST	DATE	

05/21/18 15:48

mongkols

3.06 Baseline

Perfluorononanoic acid (PFNA)

			GC Column: Geminic18 3x1 ID: 3 (mm)
Job No.: 320-39023-1	Analysis Batch Number: 224542	Client Sample ID: ER-01	Lab File ID: 2018.05.21LLCX_005.d
Lab Name: TestAmerica Sacramento	SDG No.: Instrument ID: A8_N	Lab Sample ID: 320-39023-44	Date Analyzed: 05/21/18 14:03

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION	
	TIME	REASON	ANALYST	DATE
Perfluorobutanesulfonic acid	1.77	Baseline	barnettj	05/21/18 15:23
PFBS)			1	

Lab Name: TestAmerica Sacramento	Job No.:	.: 320-39023-1	ı		
SDG No.:					
Instrument ID: A8_N	Analysis	is Batch Number: 225690	ı		
Lab Sample ID: CCB 320-225690/1	Client	ient Sample ID:			
Date Analyzed: 05/25/18 22:25	Lab Fi	File ID: 2018.05.25LLAAXX_003.d	GC Column:	n: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	barnettj	05/26/18 12:50	
Lab Sample ID: LCS 320-223901/2-A	Client	Sample ID:			
Date Analyzed: 05/25/18 22:56	Lab Fi	File ID: 2018.05.25LLAAXX_032.d	GC Column:	n: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.05	Isomers	hannigana	05/26/18 11:50	
Lab Sample ID: 320-39023-48	Client	Sample ID: ER-04			
Date Analyzed: 05/26/18 00:15	Lab Fi	File ID: 2018.05.25LLAAXX_042.d	GC Column:	in: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.69	Split Peak	barnettj	05/26/18 13:10	
Lab Sample ID: CCV 320-225690/24	Client	Sample ID:			
Date Analyzed: 05/26/18 01:25	Lab Fi	File ID: 2018.05.25LLAAXX_051.d	GC Column:	n: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.05	Isomers	barnettj	05/31/18 10:25	

Lab Name: TestAmerica Sacramento	Job No.:	.: 320-39023-1	1		
SDG No.:			ı		
Instrument ID: A8_N	Analysis	is Batch Number: 225818			
Lab Sample ID: CCB 320-225818/1	Client	Sample ID:			
Date Analyzed: 05/28/18 07:00	Lab Fi	File ID: 2018.05.27LLADX_001.d	GC Column:	n: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.70	Assign Peak	ruangyots	05/30/18 10:55	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	barnettj	05/29/18 18:24	
Lab Sample ID: MB 320-223615/1-A	Client	Sample ID:			
Date Analyzed: 05/28/18 07:23	Lab File	le ID: 2018.05.27LLADX_004.d	GC Colum	GC Column: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.71	Isomers	ruangyots akuld	05/30/18 10:59	
Lab Sample ID: 320-39023-46	Client	Sample ID: ER-02			
Date Analyzed: 05/28/18 09:29	Lab Fi	File ID: 2018.05.27LLADX_020.d	GC Column:	n: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.71	Isomers	ruangyots akuld	05/30/18 11:23	
Perfluorooctanesulfonic acid (PFOS)	3.07	Baseline	ruangyots akuld	05/30/18 11:23	

Job No.: 320-39023-1 Lab Name: TestAmerica Sacramento

Analysis Batch Number: 225820 Instrument ID: A8 N

SDG No.:

Lab File ID: 2018.05.27LLADX\_043.d Client Sample ID: MW-KLA06-01-01 Date Analyzed: 05/28/18 12:29 320-39023-7 Lab Sample ID:

GC Column: GeminiC18 3x1 ID: 3 (mm)

05/30/18 14:34 05/30/18 14:34 05/30/18 14:34 DATE mongkols mongkols mongkols ANALYST MANUAL INTEGRATION REASON Split Peak Baseline Baseline 3.08 2.30 2.72 RETENTION TIME Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorohexanesulfonic acid COMPOUND NAME (PFHXS)

SDG No.:		
Instrument ID: A8 N	Analysis Batch Number: 225873	
Lab Sample ID: CCB 320-225873/1	Client Sample ID:	
Date Analyzed: 05/28/18 17:14	Lab File ID: 2018.05.28LLA_003.d	GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	TEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	mongkols	mongkols   05/30/18 09:29	
Lab Sample ID: CCVL 320-225873/2	Client	Client Sample ID:			
Date Analyzed: 05/28/18 17:22	Lab Fi	Lab File ID: 2018.05.28LLA_004.d	GC Colun	GC Column: GeminiC18 3x1 ID: 3 (mm)	D: 3 (mm)

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION	
	TIME	REASON	ANALYST	DATE
Perfluorobutanoic acid (PFBA)	1.46	Baseline	mongkols	05/30/18 09:30
Perfluorohexanoic acid (PFHxA)	2.01	Baseline	mongkols	05/30/18 09:30
Perfluorooctanoic acid (PFOA)	2.70	Baseline	mongkols	05/30/18 09:30
Perfluorononanoic acid (PFNA)	3.06	Split Peak	mongkols	05/30/18 09:31
Perfluorooctanesulfonic acid	3.06	Baseline	mongkols	05/30/18 09:30
(PFOS)				
Perfluorododecanoic acid (PFDoA)	4.04	Baseline	mongkols	05/30/18 09:31

Lab Name: TestAmerica Sacramento	Job No.: 320-39023-1		I		
SDG No.:					
Instrument ID: A8_N	Analysis Batch Number:	r: 225894			
Lab Sample ID: 320-39023-9	Client Sample ID: KL	KLA-01-SB1-01			
Date Analyzed: 05/29/18 03:32	Lab File ID: 2018.05	.28LLB_008.d	GC Column:	n: GeminiC18 3x1 ID:	3 (mm)
COMPOUND NAME	RETENTION	MANUAL	INTEGRATION		
	TIME RI	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	Invalid Compound	und ID	mongkols	05/30/18 16:21	
Lab Sample ID: 320-39023-10	Client Sample ID: KL	KLA-01-SB1-02			
Date Analyzed: 05/29/18 03:40	Lab File ID: 2018.05	.28LLB_009.d	GC Column:	n: GeminiC18 3x1 ID:	3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME RE	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	Invalid Compound	und ID	mongkols	05/30/18 16:22	
Lab Sample ID: 320-39023-12	Client Sample ID: KL	KLA-01-SB2-02			
Date Analyzed: 05/29/18 03:56	Lab File ID: 2018.05	.28LLB_011.d	GC Column	n: GeminiC18 3x1 ID:	3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME RE	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	3.08 Baseline		mongkols	05/30/18 16:22	
Perfluorooctanesulfonic acid (PFOS)	3.08 Isomers		mongkols	05/30/18 16:22	
Lab Sample ID: 320-39023-13	Client Sample ID: KL	KLA-01-SB3-01		ſ	
Date Analyzed: 05/29/18 04:04	Lab File ID: 2018.05	.28LLB_012.d	GC Column:	GeminiC18 3x1 ID:	3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	EGRATION		
	TIME RE	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	Invalid Compound	und ID	mongkols	05/30/18 16:23	
Lab Sample ID: 320-39023-21	Client Sample ID: KL	KLA03-SB1-01			
Date Analyzed: 05/29/18 04:19	Lab File ID: 2018.05	.28LLB_014.d	GC Column:	n: GeminiC18 3x1 ID:	3 (mm)
COMPOUND NAME	RETENTION	MANUAL	INTEGRATION		
	TIME RI	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.71 Baseline		mongkols	05/30/18 16:23	

	ı	ı		GC Column: GeminiC18 3x1 ID: 3 (mm)
Job No.: 320-39023-1		Analysis Batch Number: 225894	Client Sample ID: KLA03-SB1-02	Lab File ID: 2018.05.28LLB_015.d
Lab Name: TestAmerica Sacramento	SDG No.:	Instrument ID: A8_N	Lab Sample ID: 320-39023-22	Date Analyzed: 05/29/18 04:27

Lab Name: TestAmerica Sacramento	Job No	Job No.: 320-39023-1	
SDG No.:			
Instrument ID: A8_N	Analysis	is Batch Number: 225899	
Lab Sample ID: 320-39023-53	Client	Client Sample ID: KLA02-SB2-02D	
Date Analyzed: 05/29/18 10:36	Lab Fi	Lab File ID: 2018.05.28LLB_058.d	GC Column: GeminiC18 3x1 ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEG	INTEGRATION
	TIME	REASON	ANALYST DATE
Perfluorononanoic acid (PFNA)	3.08	Split Peak	ruangyots 05/31/18 10:09 akuld
Lab Sample ID: 320-39023-54	Client	Client Sample ID: KLA02-SB1-02D	
Date Analyzed: 05/29/18 10:43	Lab Fi	Lab File ID: 2018.05.28LLB_059.d	GC Column: GeminiC18 3x1 ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEG	INTEGRATION
	TIME	REASON	ANALYST DATE
Perfluorooctanoic acid (PFOA)	2.70	Baseline	ruangyots 05/31/18 10:10 akuld
Perfluorononanoic acid (PFNA)	3.07	Split Peak	ruangyots 05/31/18 10:11 akuld

Lab Name: TestAmerica Sacramento	Job No	No.: 320-39023-1	ı		
SDG No.:			ı		
Instrument ID: A8_N	Analysis	is Batch Number: 226055	ı		
Lab Sample ID: 320-39023-5 MS DL	Client	sample ID: MW-573-03-PRL05-01	MS DL		
Date Analyzed: 05/29/18 19:36	Lab Fi	File ID: 2018.05.29LLB_012.d	GC Column:	nn: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
13C3-PFBS	1.76	Assign Peak	mongkols	05/30/18 15:13	
Lab Sample ID: 320-39023-5 MSD DL	Client	: Sample ID: MW-573-03-PRL05-01	MSD DL		
Date Analyzed: 05/29/18 19:44	Lab Fi	File ID: 2018.05.29LLB_013.d	GC Column:	nn: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
13C3-PFBS	1.77	Assign Peak	mongkols	05/30/18 15:15	
Perfluorononanoic acid (PFNA)	3.09	Baseline	mongkols	05/30/18 15:16	
Lab Sample ID: 320-39023-6 DL	Client	sample ID: MW-572-02-PRL05-01	DL		
Date Analyzed: 05/29/18 20:07	Lab Fi	File ID: 2018.05.29LLB_016.d	GC Column:	nn: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
13C3-PFBS	1.77	Baseline	mongkols	05/30/18 15:17	
Perfluorononanoic acid (PFNA)	3.09	Baseline	mongkols	05/30/18 15:18	
Lab Sample ID: 320-39023-7 DL2	Client	: Sample ID: MW-KLA06-01-01 DL2			
Date Analyzed: 05/29/18 20:31	Lab Fi	File ID: 2018.05.29LLB_019.d	GC Column:	nn: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
13C3-PFBS	1.76	Baseline	mongkols	05/30/18 15:19	
Lab Sample ID: 320-39023-49 DL	Client	: Sample ID: MW-572-02-PRL05-01D	DL		
Date Analyzed: 05/29/18 20:54	Lab Fi	File ID: 2018.05.29LLB_022.d	GC Column:	nn: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)	3.08	Baseline	mongkols	05/30/18 15:22	

Lab Name: TestAmerica Sacramento	Job No.: 320-39023-1	
SDG No.:		
Instrument ID: A8_N	Analysis Batch Number: 226055	
Lab Sample ID: 320-39023-56	Client Sample ID: ER-05	
Date Analyzed: 05/29/18 21:18	Lab File ID: 2018.05.29LLB_025.d	GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION	
	TIME	REASON	ANALYST	DATE
Perfluorooctanoic acid (PFOA)	2.71	Baseline	mongkols	05/30/18 15:23

1	I	ı		GC Column: GeminiC18 3x1 ID: 3 (mm)
Job No.: 320-39023-1		Analysis Batch Number: 226338	Client Sample ID:	Lab File ID: 2018.05.30LLC_002.d
Lab Name: TestAmerica Sacramento	SDG No.:	Instrument ID: A8_N	Lab Sample ID: CCVL 320-226338/2	Date Analyzed: 05/30/18 23:22

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION	
	TIME	REASON	ANALYST	DATE
Perfluorohexanoic acid (PFHxA)	2.01	Baseline	stendor	05/31/18 08:52
			fс	
Perfluorooctanoic acid (PFOA)	2.70	Baseline	westendor	05/31/18 08:52
			fc	

Lab Name: TestAmerica Sacramento	Job No.: 320-39023-1	ı
SDG No.:		ı
Instrument ID: A8_N	Analysis Batch Number: 226343	I
Lab Sample ID: MB 320-224254/1-A	Client Sample ID:	
Date Analyzed: 05/31/18 02:14	Lab File ID: 2018.05.30LLC 024.d	GC Column: GeminiC18 3x

Date Analyzed: 05/31/18 02:14	Lab Fi	File ID: 2018.05.30LLC_024.d	GC Column	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanoic acid (PFOA)	2.69	2.69 Split Peak	barnettj	05/31/18 14:14	

.: 320-39023-1
Job No
Sacramento
TestAmerica
Lab Name:

SDG No.:

Client Sample ID: KLA08-SW1-01 Analysis Batch Number: 226349 Lab Sample ID: 320-39023-8 Instrument ID: A8\_N

Date

Date Analyzed: 05/31/18 04:51	Lab Fi	Lab File ID: 2018.05.30LLC_044.d	GC Colum	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorobutanesulfonic acid (PFBS)	1.76	Baseline	barnettj	05/31/18 16:23	
Perfluoroheptanoic acid (PFHpA)	2.33	Baseline	barnettj	05/31/18 16:24	
Perfluorohexanesulfonic acid (PFHxS)	2.36	Baseline	barnettj	05/31/18 16:24	
Perfluorooctanoic acid (PFOA)	2.70	Baseline	barnettj	05/31/18 16:24	
Perfluorononanoic acid (PFNA)	3.07	Baseline	barnettj	05/31/18 16:26	
Perfluorooctanesulfonic acid (PFOS)	3.07	Baseline	barnettj	05/31/18 16:25	
,					

Lab Name: TestAmerica Sacramento	Job No	Job No.: 320-39023-1	ı		
SDG No.:			ı		
Instrument ID: A8_N	Analys	Analysis Batch Number: 227354	ı		
Lab Sample ID: IC 320-227354/2	Client 	Client Sample ID:			
Date Analyzed: 06/05/18 14:28	Lab Fi	Lab File ID: 2018.06.05ICAL_002.d	GC Colum	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorohexanoic acid (PFHxA)	2.03	Assign Peak	westendor fc	06/05/18 17:02	
Lab Sample ID: IC 320-227354/3	Client	Client Sample ID:			
Date Analyzed: 06/05/18 14:36	Lab Fi	Lab File ID: 2018.06.05ICAL_003.d	GC Colum	GC Column: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluoropentanoic acid (PFPeA)	1.74	Baseline	westendor	06/05/18 17:02	

Job No.: 320-39023-1	
TestAmerica Sacramento	
Lab Name:	SDG No.:

Analysis Batch Number: 227634	Client Sample ID:
Instrument ID: A8_N	Lab Sample ID: CCVL 320-227634/2

Lab File ID: 2018.06.06LLB\_004.d

Date Analyzed: 06/06/18 15:27

GC Column: Geminic18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GGRATION	
	TIME	REASON	ANALYST	DATE
Perfluorooctanesulfonic acid	3.08	3.08   Baseline	mongkols	06/07/18 10:03
PFOS)			1	
N-ethyl perfluorooctane	3.75	Baseline	mongkols	06/07/18 10:03
sulfonamidoacetic acid (NEtFOSAA)				

Lab Name: TestAmerica Sacramento	oN dot	.: 320-39023-1	ı		
SDG No.:					
Instrument ID: A8_N	Analysis	is Batch Number: 227681			
Lab Sample ID: 320-39023-23	Client	ient Sample ID: KLA03-SB2-01			
Date Analyzed: 06/06/18 22:47	Lab Fi	File ID: 2018.06.06LLC_059.d	GC Column:	n: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	mongkols	06/07/18 14:42	
Lab Sample ID: 320-39023-24	Client	Sample ID: KLA03-SB2-02			
Date Analyzed: 06/06/18 22:55	Lab Fi	File ID: 2018.06.06LLC_060.d	GC Column:	ın: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.07	Isomers	mongkols	06/07/18 14:44	
Lab Sample ID: 320-39023-25	Client	Sample ID: KLA03-SB3-01			
Date Analyzed: 06/06/18 23:03	Lab Fi	File ID: 2018.06.06LLC_061.d	GC Column:	n: Geminic18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorononanoic acid (PFNA)		Invalid Compound ID	mongkols	06/07/18 14:54	
Lab Sample ID: 320-39023-26	Client	Sample ID: KLA03-SB3-02			
Date Analyzed: 06/06/18 23:10	Lab Fi	File ID: 2018.06.06LLC_062.d	GC Column:	n: GeminiC18 3x1	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.08	Isomers	mongkols	06/07/18 14:55	

Lab Name: TestAmerica Sacramento	oN dot	Job No.: 320-39023-1	ı		
SDG No.:			ı		
Instrument ID: A8_N	Analys	nalysis Batch Number: 227681	ı		
Lab Sample ID: 320-39023-39	Client	Client Sample ID: KLA06-SB1-01			
Date Analyzed: 06/06/18 23:18	Lab Fi	Lab File ID: 2018.06.06LLC_063.d	GC Colum	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.08	Isomers	mongkols	06/07/18 14:55	
Lab Sample ID: 320-39023-40	Client	Client Sample ID: KLA06-SB1-02			
Date Analyzed: 06/06/18 23:26	Lab Fi	Lab File ID: 2018.06.06LLC_064.d	GC Colum	GC Column: GeminiC18 3x1 ID: 3 (mm)	ID: 3 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Perfluorooctanesulfonic acid (PFOS)	3.08	Isomers	mongkols	06/07/18 14:56	

# GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver	oN dob	10.: 320-39023-1			
SDG No.:					
Instrument ID: VMS_H	Analys	sis Batch Number: 415548			
Lab Sample ID: IC 280-415548/13	Client	Sample ID:			
Date Analyzed: 05/20/18 20:52	Lab File	le ID: H6493.D	GC Column:	DB-624 (75.53	ID: 0.53 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
2-Pentanone	7.38	Split Peak	moanm	05/21/18 09:27	
1,2-Dichloropropane	7.43	Split Peak	moanm	05/21/18 09:27	
Lab Sample ID: IC 280-415548/14	Client	Sample ID:			
Date Analyzed: 05/20/18 21:13	Lab File	le ID: H6494.D	GC Column:	DB-624 (75.53	ID: 0.53 (mm)
COMPOUND NAME	RETENTION	MANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Acrolein	3.33	Split Peak	moanm	05/21/18 09:45	
Acetone	3.47	Baseline	moanm	05/21/18 09:46	
Lab Sample ID: IC 280-415548/15	Client	Sample ID:			
Date Analyzed: 05/20/18 21:35	Lab File	le ID: H6495.D	GC Column:	DB-624 (75.53	ID: 0.53 (mm)
COMPOUND NAME	RETENTION	HANUAL INTE	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
1,2,4-Trichlorobenzene	16.02	Split Peak	moanm	05/21/18 09:31	

.: 320-39023-1
Job No.
TestAmerica Denver
Lab Name:

	: 415628
	Number:
	Batch
	Analysis Batch Number: 415
	H
	MS H
	ID: VMS H
SDG No.:	Instrument

	GC Column: DB-624 (75.53 ID: 0.53 (mm)
Client Sample ID:	Lab File ID: H6508.D
Lab Sample ID: IC 280-415628/10	Date Analyzed: 05/21/18 08:40

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	TEGRATION	
	TIME	REASON	ANALYST	DATE
Acetonitrile		Invalid Compound ID	moanm	05/21/18 11:23
Ethanol		Invalid Compound ID	moanm	05/21/18 11:23
Isopropyl alcohol		Invalid Compound ID	moanm	05/21/18 11:23
Lab Sample ID: IC 280-415628/11	Client	Client Sample ID:		

ID: 0.53 (mm)	
(75.53	
mn: DB-624 (75.53 ID:	
GC Column:	
File ID: H6509.D	
Lab Fil	
Date Analyzed: 05/21/18 09:02	
Dat	

COMPOUND NAME	RETENTION	MANUAL INTEGRATION	EGRATION	
	TIME	REASON	ANALYST	DATE
Isopropyl alcohol	3.62	Assign Peak	moanm	05/21/18 11:24

Lab Name: TestAmerica Denver	Job No.: 320-39023-1			
SDG No.:				
Instrument ID: SMS_Y	Analysis Batch Number:	412210		
Lab Sample ID: ICIS 280-412210/3	Client Sample ID:			
Date Analyzed: 04/21/18 12:10	Lab File ID: Y19201.D	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION REASON TIME	MANUAL INTEGRATION	DATE	
Caprolactam	6.28 Split Peak	kiekeld	04/21/18 13:08	
Lab Sample ID: STD004 280-412210/4	IC Client Sample ID:			
Date Analyzed: 04/21/18 12:38	Lab File ID: Y19202.D	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION		
	TIME REASON	ON ANALYST	DATE	
Benzoic acid	5.56 Wrong peak	kiekeld	04/22/18 06:31	
Lab Sample ID: STD010 280-412210/5	IC Client Sample ID:			
Date Analyzed: 04/21/18 13:07	Lab File ID: Y19203.D	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION		
	TIME REASON	ON ANALYST	DATE	
Benzoic acid	5.58 Wrong peak	kiekeld	04/22/18 06:31	
Caprolactam	6.25 Wrong peak	kiekeld	04/22/18 06:31	
Lab Sample ID: STD020 280-412210/6	IC Client Sample ID:			
Date Analyzed: 04/21/18 13:35	Lab File ID: Y19204.D	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION		
	TIME REASON	ON ANALYST	DATE	
Benzoic acid	5.60 Wrong peak	kiekeld	04/22/18 06:31	
4-Nitrophenol	7.73 Wrong peak	kiekeld	04/22/18 06:35	

Lab Name: TestAmerica Denver	Job Nc	No.: 320-39023-1			
SDG No.:					
Instrument ID: SMS_Y	Analysis	is Batch Number: 412210			
Lab Sample ID: STD050 280-412210/7	IC	Client Sample ID:			
Date Analyzed: 04/21/18 14:04	Lab Fi	Lab File ID: <u>Y19205.</u> D	GC Colu	GC Column: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INT	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Benzoic acid	5.63	Wrong peak	kiekeld	04/22/18 06:32	
Caprolactam	6.27	Split Peak	kiekeld	04/22/18 06:32	
2,4-Dinitrophenol	7.68	Wrong peak	kiekeld	04/22/18 06:37	
4-Nitrophenol	7.74	Wrong peak	kiekeld	04/22/18 06:36	
Lab Sample ID: STD120 280-412210/8	8 IC Client	: Sample ID:			
Date Analyzed: 04/21/18 14:33	Lab File	le ID: <u>Y19206.D</u>	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INT	INTEGRATION		
	TIME	REASON	ANALYST	DATE	
Benzoic acid	5.68	Split Peak	kiekeld	04/22/18 06:32	
Caprolactam	6.29	Split Peak	kiekeld	04/22/18 06:32	
Indeno[1,2,3-cd]pyrene	20.34	Shouldering	kiekeld	04/22/18 06:37	
Lab Sample ID: STD160 280-412210/9	9 IC Client	: Sample ID:			
Date Analyzed: 04/21/18 15:01	Lab File	le ID: <u>Y19207.D</u>	GC Column:	nn: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INT	INTEGRATION		

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

SDG No.:

Analysis Batch Number: 412210 Instrument ID: SMS Y

Client Sample ID: STD200 280-412210/10 IC Lab Sample ID:

Lab File ID: Y19208.D Date Analyzed: 04/21/18 15:30

Date Analyzed: 04/21/18 15:30	Lab Fi	File ID: Y19208.D	GC Colum	GC Column: Rxi-5Sil MS	ID: 0.25 (mm)
COMPOUND NAME	RETENTION	MANUAL INTEGRATION	GRATION		
	TIME	REASON	ANALYST	DATE	
Benzoic acid	5.71	71   Split Peak	kiekeld	04/22/18 06:33	
Caprolactam	6.32	.32 Split Peak	kiekeld	04/22/18 06:33	
Indeno[1,2,3-cd]pyrene	20.36	36 Shouldering	kiekeld	04/22/18 06:39	

Lab Name: TestAmerica Denver Job No.: 320-39023-1

SDG No.:

Instrument ID: SMS\_Y

Analysis Batch Number: 416357

Lab Sample ID: 320-39023-58

Client Sample ID: IDW-KINGSLEY-WA-LDOS01

Date Analyzed: 05/25/18 20:46

Lab File ID: Y19673.D GC Column: Rxi-5Sil MS

ID: 0.25 (mm)

COMPOUND NAME	RETENTION	MANUAL	MANUAL INTEGRATION	
	TIME	REASON	ANALYST	DATE
- - - -		( i		() () () () () () () () () () () () () (
2,4,5-Trichlorophenol		Invalid Compound ID	hoerlera	noeilera   U5/26/18 13:21
2.4.6-Trichlorophenol		Tryalid Compound ID	hoeflera	13.21

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent	ıt		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Reagent ID	Volume Added	Analyte	Concentration
LCMPFC_ALL_SU_00060	11/03/18	05/03/18	Methanol, Lot Baker	200 mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
		1	))))	•	LCd5-NEtFOSAA 00006	200 uL	d5-NEtFOSAA	0.05 ug/mL
					LCM2-6:FTS_00006	200 uL	_	0.0475 ug/mL
					LCM2-8:2FTS 00008	200 uL		0.0479 ug/mL
				•	LCM2PFHxDA 00013	200 uL	_	- 1
				•	LCM2PFTeDA_00012	200 uL	$\rightarrow$	0.05 ug/mL
				•	LCM3HFPO-DA 00002		-	
					LCM4PFHPA_00012		-	
				•	LCMSPFPEA 00013	200 uL	LACS-PFP6A	Tm/&n c0.0
				•			1304	- 1
				•			1303-	
					LCMPFDA 00018		+	
						200 uL	13C2	
							1302	
				•	· O I		1302 1302	
				•			1302	
				·	TOWNERS 0001	Z00 uL	13C4	
					TOMPETIAN 00017		10C4	Д, О П
TOOO KESCHOMIN-SPOT	10 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 /	TUCH	MAT T TANCHOM T C+ A SMMC E OF A	1	OUOL4	ZD 007	13CZ FFUIIA	- 1
1.C.05-NE+FOSAA 00006	11/08/22	MELLI	WELLINGTON, TO ASNET FORBALL	,	(Furchased Readent)	ent)	AS-INETEOSAS	50 ag/min
TCM2-6:FTS 00006		WET	I. Tot M262	-		ent)	M2-6:2FTS	
.LCM2-8:2FTS 00008	07/05/22	WEI	WELLINGTON, Lot M282FTS0717		1	ent)	M2-8:2FTS	0
. LCM2PFHxDA 00013	07/13/22	Wellingtor	Wellington Laboratories, Lot M2PFHxDA071	xDA0717		ent)	13C2-PFHxDA	50
.LCM2PFTeDA_00012	11/30/22	_	Wellington Laboratories, Lot M2PFTeDA111	eDA1117	1	ent)	13C2-PFTeDA	
.LCM3HFPO-DA_00002	08/11/20		WELLINGTON, Lot M3HFPODA0817		(Purchased Reagent)	ent)	13C3 HFPO-DA	50 ug/mL
.LCM4PFHPA_00012	05/03/22		Wellington Laboratories, Lot M4PFHpA051	[pA0517		ent)	13C4-PFHpA	20 ug/mL
.LCMSPFPEA_00013	07/20/22			eA0717		ent)	13C5-PFPeA	50 ug/mL
.LCM8FOSA_00016	10/11/22	Wellingto		A1017I	- 1	ent)		50 ug/mL
.LCMPFBA 00013	04/12/22	Wellingt		3A0417	- 1	ent)	13C4 PFBA	20
.LCMPFBS_00006	05/24/22	Wellingto	Laboratories, L	BSURIS	- 1	ent)		- 1
LCMPFDA 00018	07/13/22		Laboratories,	AU'II'	- 1	ent)		
LCMPFDOA UUUIS	10/21/22	4	Laboratories, Lot	MPFDOAUS1/		ent)	1302 PFDOA	Jm/an 06
LCMPFHXA 00019	10/21/22	Wellington	Laboratories, Lot	MPFHXAIU1/	(Furchased Readent)	ent)	13CZ FFHXA	Jm / Bn 06 / A / m.T.
T.CMPFNA OOO13	7	Weitington Mellington	Taboratories Tot	140916	- 1	ent)		
TCMPFOR 00017	10/17/22	Wellington	Laboratories, I	A1017	- 1	ent.)		- 1
LCMPFOS 00025		Wellington	Laboratories, I	S1017		ent)		
.LCMPFUda_00014	11/22/21	Wellingto	Jaboratories, I	dA1116		ent)		
LCMPFC_ALL_SU_00063	11/15/18	05/15/18	Methanol, Lot Baker	200 mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
		1	))))	•	LCd5-NEtFOSAA 00006	200 uL	d5-NEtFOSAA	0.05 ug/mL
						200 uL	-	0.0475 ug/mL
				•	LCM2-8:2FTS 00008		M2-8:2FTS	0.0479 ug/mL
_		_	_		LCM2PFHxDA_00013	200 uL	uL   13C2-PFHxDA	0.05 ug/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

SDG No.:

				4 5	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Final Volume	al ame	Reagent ID	Volume	Analyte	Concentration
				LCM21	LCM2PFTeDA 00012	200 uL	13C2-PFTeDA	0.05 ug/mL
				LCM3	LCM3HFPO-DA_00002	200 uL	13C3 HFPO-DA	0.05 ug/mL
				LCM41	LCM4PFHPA_00012		13C4-PFHpA	
				LCM51	<10 l			- 1
				LCM8FOSA	FOSA 00016	200 uL		- 1
				LCMPFBA		200 uL	13C4 PFBA	0.05 ug/mL
				LCMPFBS		200 uL		0.0465 ug/mL
				LCMPFDA	00018	- 1	- 1	
				LCMPFDOA		200 uL		
				LCMPFHxA		200 uL		
				LCMPFHxS	FHxS_00013	- 1		
				LCMPFNA	FNA_00013			
				LCMPI	LCMPFOA 00017	200 uL		0.05 ug/mL
				LCMPI	LCMPFOS 00025	- 1	13C4 PFOS	
- 1	7		-	LCMPI	- 1	200 uL	13C2 PFUnA	- 1
LCG3-NMeFOSAA UUUU6	11/00/12	WELLINGTON,			- 1	nt)	Q3-NMeFOSAA	- 1
TCM2-6:ETE 00006	11/08/22	ALLLAW TTGW	WELLINGTON, LOC GONECEOSALLI/			nc)	as-netrosaa ms-6.sems	- 1
TOWN OF THE COORD	02/1/22	MELL	INGION, LOC MZ6ZFISOZI/		- 1	111.)	MZ=0:ZFIS	
.LCMZ-8:ZFTS 00008	77/01/10	MELL	WELLINGTON, LOT MZ8ZFISU/I/	[	- 1	nt)	MZ-8:ZFTS	
.LCM2PFHxDA 00013	<u> </u>	Wellington	Lot	717	- 1	nt)	13C2-PFHxDA	- 1
.LCM2PFTeDA 00012	11/30/22	Wellington	Wellington Laboratories, Lot M2PFTeDA1	117	- 1	nt)	13C2-PFTeDA	- 1
.LCM3HFPO-DA 00002	08/17/20	MELLI	WELLINGTON, Lot M3HFPODA0817		- 1	nt)	13C3 HFPO-DA	
.LCM4PFHPA 00012	05/03/22	Wellington	Wellington Laboratories, Lot M4PFHpA0517	517	- 1	nt)	13C4-PFHpA	
.LCMSPFPEA_00013	07/20/22	Wellington	Wellington Laboratories, Lot M5PFPeAU71	717	- 1	nt)	13C5-PFPeA	- 1
.LCM8FOSA 00016	10/11/22	Wellington	ЫĽ	17I	- 1	nt)		- 1
.LCMPFBA_00013	04/12/22	Wellingtor		17	- 1	nt)	13C4 PFBA	50 ug/mL
.LCMPFBS 00006	05/24/22	Wellington	· ·	15	- 1	nt)		46.5 ug/mL
.LCMPFDA_00018	07/13/22	Wellingtor	Laboratories, Lot	17	- 1	nt)	- 1	- 1
.LCMPFDOA 00013	05/23/22	Wellington	Laboratories, Lot	17	- 1	nt)	- 1	- 1
.LCMPFHxA_00019	10/27/22	Wellington	Laboratories, Lot	17	- 1	nt)	- 1	50 ug/mL
.LCMPFHxS 00013	02/11/22	Wellington	Laboratories, I	17		nt)	1802 PFHxS	47.3 ug/mL
.LCMPFNA_00013	09/30/21	Wellington	Laboratories,	16	- 1	nt)		- 1
.LCMPFOA 00017	10/17/22	Wellington	Laboratories, Lot	17	- 1	nt)	- 1	20
.LCMPFOS 00025	10/17/22	Wellington	Lot	17		nt)	- 1	- 1
.LCMPFUdA 00014	11/22/21	Wellington	Wellington Laboratories, Lot MPFUdA1116	16	(Purchased Reagent)	nt)	13C2 PFUnA	50 ug/mL
LCMPFC_ALL_SU_00065	11/15/18	05/15/18 Methanol,	Lot Baker	200 mL LCd3-	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
		1.4	1.4.1.O.3.9	1,Cd5	T.Cd5-NETFOSAA 00006	2.00 11T,	d5-NEtFOSAA	0.05 ng/mľ,
				LCM2-	LCM2-6:FTS 00006		M2-6:2FTS	
				LCM2-	LCM2-8:2FTS 00008		M2-8:2FTS	
				LCM2I	LCM2PFHxDA 00013		13C2-PFHxDA	- 1
				LCM2			13C2-PFTeDA	
				LCM3	LCM3HFPO-DA 00002	200 uL	13C3 HFPO-DA	0.05 ug/mL
				LCM4	LCM4PFHPA_00012	200 uL	13C4-PFHpA	
				LCM5				.05
				LCM8FOSA	FOSA_00016			
				LCMPFBA	FBA 00013		13C4 PFBA	0.05 ug/mL
		_	_	LCMF	LCMPFBS_00006	200 uL	13C3-FFBS	0.0465 ug/mL

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Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent	+		
	ſ	ſ		Reagent _				
Reagent ID	EXP Date	rep Date	Used Vol	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
					LCMPFDA 00018	200 uL	13C2 PFDA	0.05 ug/mL
					LCMPFDOA 00013			
				IH.				
				<u>IH</u>				0.0473 ug/mL
				<u> </u>	LCMPFNA 00013	200 uL	13C5 PFNA	0.05 ug/mL
				ļH.	LCMPFOA_00017	200 uL	13C4 PFOA	0.05 ug/mL
					LCMPFOS_00025	200 uL		0.0478 ug/mL
				П		200 uL	13C2 PFUnA	0.05 ug/mL
.LCd3-NMeFOSAA_00006	05/19/22	WELI			(Purchased Reagent)	ent)	d3-NMeFOSAA	50 ug/mL
.LCd5-NEtFOSAA_00006	11/08/22	WELI	WELLINGTON, Lot d5NEtFOSAA1117		(Purchased Reagent	ent)	d5-NEtFOSAA	20 ng/mL
.LCM2-6:FTS_00006	02/11/22	WE	WELLINGTON, Lot M262FTS0217			ent)	M2-6:2FTS	47.5 ug/mL
.LCM2-8:2FTS_00008	07/05/22	WE				ent)	M2-8:2FTS	
.LCM2PFHxDA_00013	07/13/22	Wellingto	Lot	40717		ent)	13C2-PFHxDA	
.LCM2PFTeDA_00012	11/30/22	Wellingto	Wellington Laboratories, Lot M2PFTeDA111	41117	(Purchased Reagent)	ent)	13C2-PFTeDA	50 ug/mL
.LCM3HFPO-DA_00002	08/11/20	WEI	WELLINGTON, Lot M3HFPODA0817		(Purchased Reagent)	ent)	13C3 HFPO-DA	50 ug/mL
.LCM4PFHPA_00012	05/03/22	Wellingto	Wellington Laboratories, Lot M4PFHpA0517	0517		ent)	13C4-PFHpA	50 ug/mL
.LCM5PFPEA_00013	07/20/22	Wellingto	Wellington Laboratories, Lot M5PFPeA0	0717		ent)	13C5-PFPeA	
.LCM8FOSA_00016	10/11/22	Wellingto	Wellington Laboratories, Lot M8FOSA101	017I	(Purchased Reagent)	ent)	13C8 FOSA	
.LCMPFBA_00013	04/12/22	Wellingt	Wellington Laboratories, Lot MPFBA041	417	(Purchased Reagent	ent)	13C4 PFBA	50 ug/mL
.LCMPFBS_00006	05/24/22	Wellingt	Wellington Laboratories, Lot M3PFBS081	3815	(Purchased Reagent)	ent)	13C3-PFBS	46.5 ug/mL
.LCMPFDA_00018	07/13/22	Wellingt	Lot	717		ent)		50 ug/mL
.LCMPFDoA_00013	05/23/22	Wellington	Laboratories, Lo	0517	(Purchased Reagent)	ent)	13C2 PFDoA	50 ug/mL
.LCMPFHxA_00019	10/27/22	Wellingt		1017	(Purchased Reagent)	ent)	13C2 PFHxA	50 ug/mL
.LCMPFHxS_00013	02/11/22	Wellington	on Laboratories, Lot MPFHxS021	0217	(Purchased Reagent	ent)	1802 PFHxS	47.3 ug/mL
.LCMPFNA_00013	09/30/21	Wellingt	Wellington Laboratories, Lot MPFNA0916	916		ent)		50 ug/mL
.LCMPFOA_00017	10/17/22	Wellingt	on Laboratories, Lot MPFOAl(	017		ent)		50 ug/mL
.LCMPFOS_00025	10/11/22	Wellingt	Wellington Laboratories, Lot MPFOS101	017	(Purchased Reagent)	ent)	13C4 PFOS	47.8 ug/mL
.LCMPFUdA_00014	11/22/21	Wellingt	Wellington Laboratories, Lot MPFUdA1116	1116	(Purchased Reagent)	ent)	13C2 PFUnA	50 ug/mL
LCMPFC_ALL_SU_00066	11/15/18	05/15/18	05/15/18   Methanol, Lot Baker   20	200 mL I	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
			14 1 C U U		T.Cd5-NE+FOSAA 00006	200 11T.	OS-NE+FOSAA	0.05 mg/mT.
				ПН	LCM2-6:FTS 00006		M2-6:2FTS	
					LCM2-8:2FTS 00008	200 uL	M2-8:2FTS	
					LCM2PFHxDA_00013	200 uL	13C2-PFHxDA	
				Н	LCM2PFTeDA 00012	- 1	13C2-PFTeDA	
					LCM3HFPO-DA 00002		13C3 HFPO-DA	
				-	LCM4 FFHFA 00012		13C4-FFHDA	1.05 ug/mL
				- 11			13C3-FFF6A	
							13C8 FOSA	
				-1			13C4 PFBA	
				-1	LCMPFDA_00018			
				-				
				-1				
				-		70 07		
				-    -	LCMPFOA 0001/			
	_	_	_	_	LCMPFOS_00025	200 uL	13C4 PFOS	0.0478 ug/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

				() () () ()	Parent Reagent	t (		
Readent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Readent ID	Volume	Analyte	Concentration
						200 uL	13C2 PFUnA	0.05 ug/mL
.LCd3-NMeFOSAA 00006	05/19/22	WE	WELLINGTON, Lot d3NMeFOSAA0517	517	(Purchased Reagent)		d3-NM	50 ug/mL
.LCd5-NEtFOSAA 00006	11/08/22	ME	WELLINGTON, Lot d5NEtFOSAA11	117	(Purchased Reagent)	ent)	d5-NEtFOSAA	50 ug/mL
.LCM2-6:FTS_00006	02/11/22	×	Lot M262	7	(Purchased Reagent)	ent)	M2-6:2FTS	47.5 ug/mL
.LCM2-8:2FTS_00008	07/05/22	M	WELLINGTON, Lot M282FTS0717	7	(Purchased Reagent)	ent)	M2-8:2FTS	47.9 ug/mL
.LCM2PFHxDA_00013	07/13/22	Wellingt	Wellington Laboratories, Lot M2PFHxDA07	HxDA0717	(Purchased Reagent	ent)	13C2-PFHxDA	20 ng/mL
.LCM2PFTeDA_00012	11/30/22	Wellingt	Wellington Laboratories, Lot M2PFTeDA111	TeDA1117	(Purchased Reagent)	ent)	13C2-PFTeDA	50 ug/mL
.LCM3HFPO-DA_00002	08/11/20	[M	WELLINGTON, Lot M3HFPODA081	17	(Purchased Reagent)	ent)	13C3 HFPO-DA	50 ug/mL
.LCM4PFHPA_00012	05/03/22	Welling	Wellington Laboratories, Lot M4PFHpA051	FHpA0517	ı	ent)	13C4-PFHpA	50 ug/mL
.LCM5PFPEA_00013	07/20/22	Welling	Wellington Laboratories, Lot M5PFPeA07	FPeA0717	(Purchased Reagent	ent)	13C5-PFPeA	50 ug/mL
.LCM8FOSA_00016	10/11/22	Welling	Wellington Laboratories, Lot M8FOSA101	OSA1017I	(Purchased Reagent)	ent)	13C8 FOSA	20 ng/mL
.LCMPFBA_00013	04/12/22	Welling	Wellington Laboratories, Lot MPFBA041	FBA0417		ent)	13C4 PFBA	20 ng/mL
.LCMPFBS_00006	05/24/22	Welling	Wellington Laboratories, Lot M3PFBS081	FBS0815		ent)		
.LCMPFDA_00018	07/13/22	Welling		FDA0717		ent)		20 ng/mL
.LCMPFDOA_00013	05/23/22	Welling	Wellington Laboratories, Lot MPFDoA051	DoA0517		ent)		20 ng/mL
.LCMPFHxA_00019	10/27/22	Welling	Wellington Laboratories, Lot MPF	MPFHxA1017	(Purchased Reagent)	ent)	13C2 PFHxA	50 ug/mL
.LCMPFHxS_00013		Welling		HxS0217		ent)		47.3 ug/mL
.LCMPFNA_00013	09/30/21	Welling		FNA0916	(Purchased Reagent	ent)		
.LCMPFOA_00017	10/11/22	Welling		FOA1017	(Purchased Reagent)	ent)		20 ng/mL
.LCMPFOS 00025	10/11/22	Welling	Wellington Laboratories, Lot MPFOS101	FOS1017	(Purchased Reagent)	ent)	13C4 PFOS	47.8 ug/mL
.LCMPFUda 00014	11/22/21	Welling	Lot	MPFUdA1116		ent)	13C2 PFUnA	
I.CPFC-IS 00045	11/03/18	05/03/18	12.85	200 mL	11	200 ut	13C2-PFOA	0.05 ng/mL
T,CM2PF0A 00008	+	Welling	to	M2PF0A0216	~		+	
	1 1	, , , , , , , , , , , , , , , , , , ,	con page and page	0 4 7 0 7 7			11000	- 1 1
LCPFC-IS 00047	-	05/15/18	Methanol, Lot 090285	200 mL		200 uL	13C2-PFOA	0.05 ug/mL
.LCM2PFOA_00008	02/12/21	Welling	Wellington Laboratories, Lot M2P	M2PFOA0216	(Purchased Reagent)	ent)	13C2-PFOA	20 ng/mL
LCPFC-IS 00048	11/15/18	05/15/18	05/15/18  Methanol, Lot 090285	200 mL	LCM2PFOA 00008	200 uL	13C2-PFOA	0.05 ug/mL
.LCM2PFOA 00008	02/12/21	Welling		M2PFOA0216	(Purchased Reagent)	ent)	13C2-PFOA	50 ug/mL
LCPFC-IS 00049	11/15/18	05/15/18	05/15/18   Methanol, Lot 090285	200 mL	LCM2PFOA 00008	200 uL	13C2-PFOA	0.05 ug/mL
. LCM2PFOA 00008	_	Welling	cories, Lot				+	
I.CPFC-IS 00050	11/15/18	05/15/18	05/15/18   Methanol. Lot 090285	200 mL	LCM2PFOA 00008	200 uL	13C2-PFOA	0.05 ng/mL
.LCM2PFOA 00008	_	Welling	ories, Lot	9	(Purchased Reagent)		+	
T.CPFC-TS 00052	11/15/18	05/25/18	05/25/18   Methanol. Tot 090285	200 mT.	T.CM2PFOA 00008	200 uT.	13C2-PFOA	0.05 ng/mT,
.LCM2PFOA 00008		Welling	ot	M2PFOA0216	(Purchased Reagent)		13C2-PFOA	
LCPFC_LLO_00006	08/20/18	02/22/18	MeOH/H20, Lot Baker	200 mL	LCMPFC_ALL_SU_00041	10 mL	13C2-PFOA	2.5 ng/mL
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	_	200 mL	LCM2PFOA_00008	200 uL	13C2-PFOA	0.05 ug/mL
		,						
LCM2PFOA 00008	$\rightarrow$	Welling	ton Laboratories, Lot	M2PFOA0216	(Purchased Reagent)	,	13C2-PFOA	
LCPFC_LLO_00006	08/20/18	02/22/18	MeOH/H2O, Lot Baker 141039	200 mL	LCMPFC_ALL_SU_00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
							d5-NEtFOSAA	2.5 ng/mL
							M2-6:2FTS	
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	
							13C2-PFTeDA	2.5 ng/mL
_	_		_	_			тас4-кғнра	Tm/bu c·7

SDG No.:

Job No.: 320-39023-1 Lab Name: TestAmerica Sacramento

			£	4	Parent Reagent	t		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume	Final Volume	Readent ID	Volume	Analvte	Concentration
- 1	5	5				5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	.	
							13C5-FFF6A	Z.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
								2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
							13C2 PFDoA	2.5 ng/mL
							1802 PFHxS	2.365 ng/mL
								2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
								2.39 ng/mL
		-					13C2 PFUnA	2.5 ng/mL
LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker 200	mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
			H.4 H.C U.V.	) i	T.C.d.SNETFOSAA 00006	200 11T.	45-75-75-75-75-75-75-75-75-75-75-75-75-75	0.05 mg/mT.
				ΙÄ			M2-6:2FTS	
				Ä	LCM2-8:2FTS 00008		M2-8:2FTS	
				Ä	LCM2PFHxDA 00013	200 uL	13C2-PFHxDA	
				Ă	LCM2PFTeDA 00012	200 uL	13C2-PFTeDA	0.05 ug/mL
				Ä	LCM4PFHPA 00012	200 uL	13C4-PFHpA	0.05 ug/mL
				Ă	LCM5PFPEA 00013	200 uL	13C5-PFPeA	0.05 ug/mL
				Ä	LCM8FOSA 00016		13C8 FOSA	
				Ă	LCMPFBA 00013	200 uL	13C4 PFBA	1
				Ä				
				Ă	LCMPFDA 00018		13C2 PFDA	0.05 ug/mL
				Ă	LCMPFDOA 00013	200 uL	13C2 PFDoA	0.05 ug/mL
				Ă	LCMPFHxA_00019	200 uL	13C2 PFHxA	0.05 ug/mL
				Ă	LCMPFHxS_00013	200 uL	1802 PFHxS	0.0473 ug/mL
				Ä	LCMPFNA_00013	200 uL	13C5 PFNA	0.05 ug/mL
				Ä	LCMPFOA_00017	200 uL	13C4 PFOA	0.05 ug/mL
				Ă	LCMPFOS_00025	700 nr	13C4 PFOS	0.0478 ug/mL
				Ä	LCMPFUdA_00014	200 uL	13C2 PFUnA	0.05 ug/mL
LCd3-NMeFOSAA_00006	05/19/22	WE			(Purchased Reagent)	ent)	d3-NMeFOSAA	- 1
LCd5-NEtFOSAA 00006	11/08/22	WE	WELLINGTON, Lot d5NEtFOSAA1117			ent)	d5-NEtFOSAA	
LCM2-6:FTS 00006	02/11/22	S	WELLINGTON, Lot M262FTS0217		- 1	ent)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00008	07/05/22			!		ent)	M2-8:2FTS	
LCM2PFHxDA_00013	07/13/22	$\dashv$		0717	- 1	ent)	13C2-PFHxDA	
LCM2PFTeDA_00012	11/30/22	Wellingt	Wellington Laboratories, Lot M2PFTeDA111	1117		ent)	13C2-PFTeDA	
LCM4PFHPA_00012	05/03/22	Welling.	Wellington Laboratories, Lot M4PFHpA051	1517	(Purchased Reagent)	ent)	13C4-PFHpA	50 ug/mL
LCM5PFPEA_00013	07/20/22	Welling.	Wellington Laboratories, Lot M5PFPeA071	1717	(Purchased Reagent)	ent)	13C5-PFPeA	50 ug/mL
LCM8FOSA_00016	10/11/22	Welling	Wellington Laboratories, Lot M8FOSA1017I	17I	(Purchased Reagent)	ent)	13C8 FOSA	50 ug/mL
LCMPFBA_00013	04/12/22	Wellin	Wellington Laboratories, Lot MPFBA041	117	(Purchased Reagent)	ent)	13C4 PFBA	50 ug/mL
LCMPFBS 00006	05/24/22	Welling	Wellington Laboratories, Lot M3PFBS0815	815	(Purchased Reagent)	ent)	13C3-PFBS	46.5 ug/mL
LCMPFDA 00018	07/13/22	Wellin	Wellington Laboratories, Lot MPFDA071	17	(Purchased Reagent)	ent)	13C2 PFDA	50 ug/mL
LCMPFDoA 00013	05/23/22	Welling	Wellington Laboratories, Lot MPFDoA051	517	(Purchased Reagent)	ent)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00019	10/27/22	Welling	Wellington Laboratories, Lot MPFHxA1017	017	(Purchased Reagent)	ent)	13C2 PFHxA	20 ng/mL
LCMPFHxS_00013	02/11/22	Welling	Wellington Laboratories, Lot MPFHxS0217	217		ent)	1802 PFHxS	
LCMPFNA_00013	09/30/21	Wellin	Wellington Laboratories, Lot MPFNA0916	916	(Purchased Reagent)	ent)	13C5 PFNA	20 ng/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent			
	E X	Prep	Dilutant	Keagent Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCMPFOA_00017	10/17/22	Wellingt	Wellington Laboratories, Lot MPI	MPFOA1017	(Purchased Reagent)	nt) 13C4 PFOA		50 ug/mL
LCMPFOS_00025	10/11/22	Wellingt	Wellington Laboratories, Lot MPI	Lot MPFOS1017	(Purchased Reagent)	1304		47.8 ug/mL
LCMPFUdA 00014	11/22/21	Wellingt	Wellington Laboratories, Lot MPFUdA1116	FUdA1116	(Purchased Reagent)	nt)   13C2 PFUnA	A	20 ng/mL
LCPFC_LL0_00007	12/01/18	06/05/18	MeOH/H2O, Lot Baker 141039	200 mL	LCMPFC_ALL_SU_00075	10 mL 13C2-PFOA		2.5 ng/mL
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18	Methanol, Lot Baker 141039	200 mL	LCM2PFOA_00008	200 uL 13C2-PFOA		0.05 ug/mL
LCM2PFOA 00008	02/12/21	Wellingt	oratories, Lot	M2PFOA0216	(Purchased Readent)	nt) 13C2-PFOA		50 ug/mL
LCPFC_LLO_00007	1	06/05/18	ker	200 mL	LCMPFC	10 mL	AA	1
						d5-NEtFOSAA	AA	2.5 ng/mL
						M2-6:2FTS		2.375 ng/mL
						M2-8:2FTS		
						13C2-PFHxDA	DA	2.5 ng/mL
						1304 PETE	LA k	2.5 ng/mL
						13C4-FFHPA 13C5-PFPAA	'A	2.5 ng/mL
						13C8 FOSA	7.7	2.5 ng/mL
						13C4 PFBA		2.5 ng/mL
						13C3-PFBS		2.325 ng/mL
						13C2 PFDA		2.5 ng/mL
						13C2 PFDOA	A	2.5 ng/mL
						13C2 PFHxA	A	2.5 ng/mL
						1802 PFHxS	Ø	2.365 ng/mL
								2.5 ng/mL
						13C4 PFOS		2.39 ng/mL
	$\dashv$	$\rightarrow$			$\rightarrow$		А	2.5 ng/mL
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18	Methanol, Lot Baker 141039	200 mL	LCd3-NMeFOSAA_00008	200 uL d3-NMeFosaa	AA	0.05 ug/mL
					LCd5-NEtFOSAA_00008	200 uL d5-NEtFOSAA	AA	0.05 ug/mL
					LCM2-6:FTS_00008	200 uL M2-6:2FTS		0.0475 ug/mL
					LCM2-8:2FTS 00010	ηĪ		0.0479 ug/mL
					LCM2PFHxDA 00016	'n.	DA	
					LCMZPF"TeDA 00014	200 ul 13CZ-PFTeDA	DA K	0.05 ug/mL
					LCMSPFPEA 00015	3 13		
					LCM8FOSA 00019	ηŢ		
					LCMPFBA 00015	ηŢ		0.05 ug/mL
					LCMPFBS 00008	200 uL 13C3-PFBS		0.0465 ug/mL
					LCMPFDA_00020	200 uL 13C2 PFDA		0.05 ug/mL
						ηT	A	0.05 ug/mL
						200 uL 13C2 PFHxA	A	0.05 ug/mL
						uL 1802	S	0.0473 ug/mL
						uL 13C5		0.05 ug/mL
					LCMPFOA UUUIS	uL 1304		
					LCMPETIAN 00017	200 ul 1304 PEUS	K	0.04/8 ug/mL
					TOTAL CONTRACT	4001 HD	4	) ; ; ; ;

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent	т		
	dхв	Prep	Dilutant	Final	1	Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCd3-NMeFOSAA_00008	11/08/22	MEL	WELLINGTON, Lot d3NMeFOSAA1	1117	(Purchased Reagent)	ent)	d3-NMeFOSAA	50 ug/mL
LCd5-NEtFOSAA_00008	11/08/22	WI	WELLINGTON, Lot d5NEtFOSAA1117	1117		ent)	d5-NEtFOSAA	50 ug/mL
LCM2-6:FTS_00008	02/16/23		WELLINGTON, Lot M262FTS0218	18		ent)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS_00010	01/24/23		WELLINGTON, Lot M282FTS0118	18	(Purchased Reagent)	ent)	M2-8:2FTS	47.9 ug/mL
LCM2PFHxDA_00016	07/13/22		Wellington Laboratories, Lot M2PFHxDA0	FHxDA0717	(Purchased Reagent)	ent)	13C2-PFHxDA	20 ng/mL
LCM2PFTeDA 00014	11/30/22	-	Wellington Laboratories, Lot M2PFTeDA1	FTeDA1117	(Purchased Reagent	ent)	13C2-PFTeDA	50 ug/mL
LCM4PFHPA 00014	05/03/22		Wellington Laboratories, Lot M4PFHpA051	PFHpA0517	(Purchased Reagent)	ent)	13C4-PFHpA	50 ug/mL
LCM5PFPEA 00015	07/20/22		Wellington Laboratories, Lot M5P	Lot M5PFPeA0717	(Purchased Reagent)	ent)	13C5-PFPeA	50 ug/mL
LCM8FOSA_00019	10/11/22		Wellington Laboratories, Lot M8F	Lot M8FOSA1017I	(Purchased Reagent)	ent)	13C8 FOSA	50 ug/mL
LCMPFBA_00015	02/16/23		Wellington Laboratories, Lot MP	Lot MPFBA0218	(Purchased Reagent	ent)	13C4 PFBA	50 ug/mL
LCMPFBS_00008	02/15/23			Lot M3PFBS0218		ent)	13C3-PFBS	46.5 ug/mL
LCMPFDA_00020	02/16/23		I J	PEDA0218		ent)		20 ng/mL
LCMPFDoA_00015	02/16/23		Laboratories,	Lot MPFDoA0218		ent)		
LCMPFHxA_00022	10/27/22	Wellington	Laboratories,	Lot MPFHxA1017	(Purchased Reagent)	ent)	13C2 PFHxA	50 ug/mL
LCMPFHxS_00015	03/22/23		Laboratories,	Lot MPFHxS0318	(Purchased Reagent)	ent)		47.3 ug/mL
LCMPFNA_00015	12/14/22			Lot MPFNA1217		ent)		50 ug/mL
LCMPFOA_00019	05/04/23			Lot MPFOA0418		ent)		50 ug/mL
LCMPFOS_00027	02/15/23		Wellington Laboratories, Lot MP	Lot MPFOS0218	(Purchased Reagent)	ent)	13C4 PFOS	47.8 ug/mL
LCMPFUdA_00017	11/22/21	Wellingt	Wellington Laboratories, Lot MPI	Lot MPFUdA1116	(Purchased Reagent	ent)	13C2 PFUnA	50 ug/mL
LCPFC LL1 00005	08/20/18	ь	02/22/18 MeOH/H2O, Lot 90285	200 mL	LCMPFC ALL SU 00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
1					 		_	
							M2-6:2FTS	
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	1
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	
							13C3-PFBS	2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
							13C2 PFDoA	2.5 ng/mL
							13C2 PFHxA	2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C4 PFOS	2.39 ng/mL
							13C2 PFUnA	2.5 ng/mL
				H	LCPFCSP_00136	50 uL	_	0.02335 ng/mL
							1H,1H,2H,2H-perfluorohexane	
							Sodium	T#/ 25 1.000
							1H,1H,2H,2H-perfluorooctane	Jiii / 670.0
							sulfonate (6:2)	1
							Sodium 1H,1H,2H,2H-perfluorodecane	0.02395 ng/mL
	_	_		_			surronare (o:z)	_

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

				Reagent	Farent Keagent	nt	ī	
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.025 ng/mL
							N-methyl perfluorooctane	0.025 ng/mL
							Perfluorobutyric acid	0.025 ng/mL
							Perfluorobutanesulfonic acid	
							(FFBS) Perfluorodecanoic acid	0.025 ng/mL
							Perfluorodecane Sulfonic acid	0.0241 ng/mL
							Perfluoroheptanoic acid	0.025 ng/mL
							(Fringe) Perfluoroheptanesulfonic acid	0.0238 ng/mL
							Perfluorohexanesulfonic acid (PEHxS)	0.02275 ng/mL
							Perfluorononanoic acid (PFNA)	0.025 ng/mL
							fonic	
							$\sim$	
							Perfluorooctanesultonic acid (PFOS)	0.0232 ng/mL
							Perfluorooctane Sulfonamide	0.025 ng/mL
							Perfluoropentanoic acid	0.025 ng/mL
							Perfluoropentanesulfonic acid	0.02345 ng/mL
							Perfluorotetradecanoic acid	0.025 ng/mL
							Perfluorotridecanoic acid	0.025 ng/mL
						- 1	$\rightarrow$	
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker 141039	200 mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
					LCd5-NEtFOSAA_00006	200 uL	_	0.05 ug/mL
					LCM2-6:FTS_00006	200 uL	$\overline{}$	l I
					LCM2-8:2FTS 00008		$\rightarrow$	
					LCM2PFHxDA 00013		$\rightarrow$	
					LCM2PFOA 00008	200 uL	13C2-PFOA	0.05 ug/mL
					ICMAPEHPA 00012	200 an		1.00 ug/ml
					LCMSPFPEA 00013		-	
					LCM8FOSA 00016		_	
					LCMPFBA 00013	200 uL	_	
					LCMPFBS 00006		13C3-	
					LCMPFDA_00018	200 uL	_	0.05 ug/mL
							1302	
							1302	
					LCMPFHxS 00013		1802	
							1305	
					LCMPFOA 0001/	200 uL	_	
					TCMPFIIAN 00020	200 al	1 0 C T	0 05 mI
ACCOUNTY AND A SOURCE SECOND	05/19/22	MFT	WETTINGTON TO TO ASMMERITATIONS AND TO THE MENTINGTON THE MENTINGTON THE MENTINGTON TO THE MENTINGTON THE MENTI	1517			1001 731 NIV	7 / mI
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Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

Reagent ID (Purchased			Readent	Parent Reagent			
00006 11/08/22 WELLINGTON, Lot ASSETSOATI (Purchased 05 02/17/22 WELLINGTON, Lot M28/ETSOATI (Purchased 13 07/05/22 WELLINGTON, Lot M28/ETSOATI (Purchased 17/05/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 17/07/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 17/07/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 17/07/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 17/17/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 10/17/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 11/17/22 Wellington Laboratories, Lot M28/ETSOATI (Purchased 11/17/22) (Purchased 11/17/2			Final Volume		Volume Added	Analyte	Concentration
17.722	00	T > + AENTO+ T		(4)	-	1 K K C C C E + E E I K K C C C E + E E I K K C C C E + E E I K C C C E E I K C C C E + E E I K C C C E E I K C C C E E I K C C C E E I K C C C E E I K C C C E E I K C C C C E I K C C C C E I K C C C C E I K C C C C E I K C C C C E I K C C C C C E I K C C C C C C E I K C C C C C C C C C C C C C C C C C C	T ( )
0.00   07/05/22	M	TOT MORELE	\		( )	W2 6.2EES	
13 07/13/22 Wellington Laboratories, Lot MZPENDOTI (Furchased OZ/12/22) Wellington Laboratories, Lot MZPENDOTI (Furchased OZ/12/22) Wellington Laboratories, Lot MZPENDOTI (Furchased OZ/12/22) Wellington Laboratories, Lot WZPENDOTI (Furchased OZ/17/22) WELLINGTOTI (Furchased OZ/17/22) WELLINGTOTI (Furchased OZ/17/22) WZPENDOTICES (Furchased		LINGTON, LOC MZ8ZFISUZI/		- 1	( )	MZ-0:77.0	- 1
13   07/13/21   Wellington Laboratories, Lot M2PPE03016   Fourchased   11/30/22   Wellington Laboratories, Lot M2PPE03016   Fourchased   05/03/22   Wellington Laboratories, Lot M2PPE03017   Fourchased   07/20/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   10/11/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   04/12/22   Wellington Laboratories, Lot M3PPE03015   Fourchased   04/12/22   Wellington Laboratories, Lot M3PPE03015   Fourchased   05/23/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   05/23/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   07/13/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   07/17/22   Wellington Laboratories, Lot M3PPE03017   Fourchased   10/17/22   Wellington Laboratories, Lot W3PPE03017   Fourchased   10/17/22   Wallington Laboratories, Lot W3PPE03017   Fourchased   10/17/22   W3PPE03017	-	.82F.1	100	- 1	t)	MZ-8:ZF'I'S	
05/12/21   Wellington Laboratories, Lot WAPFTEDA117   Purchased	>	Lot	xDA0/1/	- 1	t)	13CZ-PFHXDA	
17   30/22   Wellington Laboratories, Lot MAPPFHEAD117   Purchased		Laboratories, Lot M2PF	OA0216	- 1	t)	13C2-PFOA	
2 05/03/22   Wellington Laboratories, Lot MRPFRA0117   (Purchased 10/11/22   Wellington Laboratories, Lot MRPFRA0117   (Purchased 10/11/22   Wellington Laboratories, Lot MRPRO340171   (Purchased 04/12/22   Wellington Laboratories, Lot MRPRO34017   (Purchased 05/24/22   Wellington Laboratories, Lot MRPRO317   (Purchased 07/13/22   Wellington Laboratories, Lot MRPRO3017   (Purchased 10/27/22   Wellington Laboratories, Lot MRPRO3017   (Purchased 10/27/22   Wellington Laboratories, Lot MRPRO3017   (Purchased 10/17/22   Wellington Laboratories, Lot MRPRO3017   (Purchased 11/22/21   Mellington Laboratories, Lot MRPRO3017   (Purchased 11/22/21   Mellington	_		eDA1117	(Purchased Reagent)	t)	13C2-PFTeDA	20 ng/mL
3   07/20/22   Wellington Laboratories, Lot MBFDSA10171   (Purchased 04/12/22   Wellington Laboratories, Lot MBFDSA10171   (Purchased 04/12/22   Wellington Laboratories, Lot MBFDSA1017   (Purchased 07/13/22   Wellington Laboratories, Lot MBFDSA017   (Purchased 07/13/22   Wellington Laboratories, Lot MBFDSA017   (Purchased 07/13/22   Wellington Laboratories, Lot MBFMS017   (Purchased 02/17/22   Wellington Laboratories, Lot MBFMS017   (Purchased 02/17/22   Wellington Laboratories, Lot MBFMS017   (Purchased 10/17/22   Wellington Laboratories, Lot MBFMS017   (Purchased 10/17/22   Wellington Laboratories, Lot MBFMS0107   (Purchased 10/17/22   Wellington Laboratories, Lot MBFMS0107   (Purchased 10/17/22   Wellington Laboratories, Lot MBFMS0107   (Purchased 11/22/21   Wellington Laboratories, Lot MBFMS0107   (Purchased 10/17/22   (Purchased 10/17/22   (Purchased 10/17/22   (Purchased 10/17/22   (Purchase			HpA0517	(Purchased Reagent)	t)	13C4-PFHpA	50 ug/mL
19/17/22 Wellington Laboratories, Lot MPPBA0417 (Purchased 05/24/22 Wellington Laboratories, Lot MPPBA0417 (Purchased 05/24/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 05/23/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 10/27/22 Wellington Laboratories, Lot MPPBA0017 (Purchased 05/37/22 Wellington Laboratories, Lot MPPBA0177 (Purchased 10/17/22 Wellington Laboratories, Lot MPPBA0177 (Purchased 10/17/22 Wellington Laboratories, Lot MPPBA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPBA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPBA0107 (Purchased 11/22/21 Wellington Laboratories, Lot MPPBA0107 (Purchased 11/22/21 Wellington Laboratories, Lot MPPBA0107 (Purchased 11/22/21 Wellington Laboratories, Lot MPPGA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPGA0107 (Purchased 10/22/21) Wellington		L	PeA0717	(Purchased Reagent)	t)	13C5-PFPeA	50 ug/mL
04/12/22 Wellington Laboratories, Lot MPPBA0417 (Purchased 05/24/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 07/13/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 10/27/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 10/17/22 Wellington Laboratories, Lot MPPBA0717 (Purchased 05/30/21 Wellington Laboratories, Lot MPPRA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPRA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPRA0107 (Purchased 10/17/22 Wellington Laboratories, Lot MPPRA0107 (Purchased 11/22/21 Wellington Laboratories, Lot MPPGA1017 (Purchased 11/22/21 Wellington Laboratories, Lot 090285 (Lot MPPGA1017) (Purchased 11/22/21 Wellington Laboratories, Lot MPPGA1017 (Purchased 11/22/21 Wellington Laboratories, Lot 090285 (Lot MPPGA1017) (Purchased 11/22/21 Wellington Laboratories, Lot MPPGA1017) (Purchased 11/22/21 Wellington Laboratories, Lot 090285 (Lot MPPGA1017) (Purchased 11/22/21 Wellington Laboratories, Lot WPPGA1017) (Purchased 11/22/21/21 Wellington Laboratories, Lot WPPGA1017) (Purchased 11/22/21/21 Wellington Laboratories, Lot WPPGA1017) (Purchased 11/22/21/21 Wellington Laboratories, Lot WPPGA1		Laboratories, Lot M8FOS	SA1017I	ı	t)	13C8 FOSA	50 ug/mL
05/23/22   Wellington Laboratories, Lot MPFBA0717   (Purchased 05/23/22   Wellington Laboratories, Lot MPFBA0717   (Purchased 10/27/22   Wellington Laboratories, Lot MPFBA0107   (Purchased 05/23/22   Wellington Laboratories, Lot MPFBA0107   (Purchased 05/20/22   Wellington Laboratories, Lot MPFBA0107   (Purchased 10/17/22   Wellington Laboratories, Lot MPFBA0107   (Purchased 10/17/22   Wellington Laboratories, Lot MPFBA0107   (Purchased 10/17/22   Wellington Laboratories, Lot MPFBA0117   (Purchased 10/17/22   Wellington Laboratories, Lot MPFBA0117   (Purchased 10/17/22   Wellington Laboratories, Lot MPFBA0117   (Purchased 10/12/21   Wellington Laboratories, Lot MPFBA0117   (Purchased 10/12/21   Wellington Laboratories, Lot MPFBA01116   (Purchased 10/12/2		n Laboratories, Lot MPFE	3A0417	(Purchased Reagent)	t)	13C4 PFBA	50 ug/mL
07/13/22 Wellington Laboratories, Lot MPEDA0717 (Purchased 10/27/22 Wellington Laboratories, Lot MPEDA0517 (Purchased 02/17/22 Wellington Laboratories, Lot MPEHAS017 (Purchased 02/17/22 Wellington Laboratories, Lot MPEHAS017 (Purchased 10/17/22 Wellington Laboratories, Lot MPERA01017 (Purchased 10/17/22 Wellington Laboratories, Lot MPEO31017 (Purchased 10/17/22 Wellington Laboratories, Lot MPEO31017 (Purchased 11/22/21 Wellington Laboratories, Lot MPEO31017 (Purchased 08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LCPFCSP_00132		1 Laboratories, Lot M3PF		ı	t)	13C3-PFBS	46.5 ug/mL
05/23/22   Wellington Laboratories, Lot MPFDA&0517   (Purchased 02/17/22   Wellington Laboratories, Lot MPFHXA017   (Purchased 09/30/21   Wellington Laboratories, Lot MPFHXA017   (Purchased 10/17/22   Wellington Laboratories, Lot MPFDA,017   (Purchased 10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased 10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased 11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased 08/20/18   02/20/18   Methanol, Lot 090285   10000 uL   LCPFCSP_00132   LCPFCSP_00	/22		DA0717	(Purchased Reagent)	t)	13C2 PFDA	50 ug/mL
10/27/22   Wellington Laboratories, Lot MPEHXA1017   (Purchased 02/17/22   Wellington Laboratories, Lot MPEHX6017   (Purchased 10/17/22   Wellington Laboratories, Lot MPENA1017   (Purchased 10/17/22   Wellington Laboratories, Lot MPEOS1017   (Purchased 10/17/22   Wellington Laboratories, Lot MPEOS1017   (Purchased 11/22/21   Wellington Laboratories, Lot MPEOS1017   (Purchased 08/20/18   02/20/18   Methanol, Lot 090285   10000 uL LCPFCSP_00132   Lot MPEOS1018   Lot MPEOS1018   Lot Wellington Laboratories, Lot MPEOS1018   Lot Wellington Laboratories, Lot MPEOS1019   LCPFCSP_00132   Lot Wellington Laboratories, Lot MPEOS1019   Lot Wellington Laboratories, Lot MPEOS1019   Lot Wellington Laboratories, Lot MPEOS1019   Lot Wellington Laboratories, Lot Wellington Laborat			OA0517	(Purchased Reagent)	t)	13C2 PFDoA	50 ug/mL
02/17/22   Wellington Laboratories, Lot MPERXS0217   (Purchased 10/17/22   Wellington Laboratories, Lot MPEOA1017   (Purchased 10/17/22   Wellington Laboratories, Lot MPEOA1017   (Purchased 11/22/21   Wellington Laboratories, Lot MPEOA1016   (Purchased 08/20/18   02/20/18   Methanol, Lot 090285   10000 ul LOPFGSP_00132			xA1017		t)	13C2 PFHxA	50 ug/mL
10/17/22   Wellington Laboratories, Lot MFPRA0916   Purchased     10/17/22   Wellington Laboratories, Lot MFPCA1017   Purchased     11/22/21   Wellington Laboratories, Lot MFPCA1017   Purchased     11/22/21   Wellington Laboratories, Lot MFPCA1016   Purchased     10/20/18   02/20/18   Methanol, Lot 090285   10000 uL LCPFCSP_00132     10/20/21   Lot 090285   Lot 090285   LOFFCSP_00132     10/20/21   Lot 090285   LOFFCSP_00132     10/20/21   LOFFC		占	xS0217	(Purchased Reagent)	t)	1802 PFHxS	47.3 ug/mL
10/17/22   Wellington Laboratories, Lot MPF0Al017   (Purchased 11/22/12   Wellington Laboratories, Lot MPF0S0107   (Purchased 08/20/18   Wellington Laboratories, Lot MPF0Al116   (Purchased 08/20/18   Methanol, Lot 090285   10000 uL LCPFCSP_00132   (Purchased 08/20/18   Methanol, Lot 090285   Loop of LCPFCSP_00132   (Purchased 08/20/18   Methanol, LOOP of LCPFCSP_00132		n Laboratories, Lot MPFN	NA0916	1	t)		1
10/17/22 Wellington Laboratories, Lot MPFOSI017 (Purchased 11/22/21 Wellington Laboratories, Lot MPFUGAII16 (Purchased 08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LCPFCSF_00132	/22	n Laboratories, Lot MPFC	DA1017	ı	t)	13C4 PFOA	50 ug/mL
11/22/21 Wellington Laboratories, Lot MPFUGA1116 (Purchased 08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LCPFCSP_00132		n Laboratories, Lot MPFC	OS1017		t)		47.8 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LCPFCG	ľ		dA1116		t)		
	+-	2	년	3PFCSP 00132	1 mL	Sodium	
				1		2H, 2	
						sulfonate (4:2)	Tex/ 2010
						SOULUMN SH_nerfluorooctene	711176n 0460.0
						sulfonate (6:2)	
						Sodium	0.0958 ug/mL
						1H, 1H, 2H, 2H-perfluorodecane	
						sulfonate (8:2)	
						N-ethyl perfluorooctane	0.1 ug/mL
						N-methyl perfluoroottane	0.1 ng/mT,
						sulfonamidoacetic acid	
			-			Perfluorobutyric acid	0.1 ug/mL
						Perfluorobutanesulfonic acid	0.0884 ug/mL
						(PFBS)	
						Feriluorodecanoic acid	
						Perfluorodecane Sulfonic acid	
						Perfluoroheptanoic acid (סביהשט)	0.1 ug/mL
						Perfluorohentanesulfonio acid	0.0952 mg/mT.
						Perfluorohexanesulfonic acid	
						Porfluoronatanoi a ani d (PEON)	1.096 ug/m⊥
						Post line of the state of the s	
						(PEDS)	лш/gn 0260.0

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Part				000	Parent Reagent			
Perfilementic Sulformation   Perfilementic Sulformation   O	Exp Date	Prep Date	Dilutant Used	Final				Concentration
Perfluctorpartaneolic acid   0.09						Perfluoroctane	Sulfonamide	
Perfluorotetradecanoic acid						Perfluoropentan	noic acid	
Perfilosoptical acid						Perfluoropentan		
Perfluorential caid						Perfluorotetrad	decanoic acid	- 1
Decision   Partition   Partition   Decision   Decisio						Perfluorotridec	canoic acid	
Methanol, Lot 090285   10000 ul LC4:2FTS_00003   200 ul Sodium   1.0	_					Perfluoroundeca	anoic acid	
14   14   15   14   15   15   15   15	_		Lot 09028	10000 uL		ηŢ		
1.05   2.00 ul   3.01 ul   1.01   1.01   1.02   1						IH, IH, ZH, ZH-per Sulfonate (4:2)	rfluorohexane	
18,114,124,24=perfluoroccane   10,058					I,C6:2FTS 00003	I.		
LCR:ZPTG_00003   200 ul Sedium coccane   0.958							rfluorooctane	
HighEnder (8:2)   HighEnder (8:2)					LC8:2FTS 00003	uL		
LCN-MerOSAA_00005   200 uL   N-methyl perfluoroctane   1					l	1H, 1H, 2H, 2H-per	rfluorodecane	
CNN-WeFOSAA_00005					LCN-EtFOSAA_00004	uL	prooctane	
TOPPER						1	cic acid	
ICPPEA 00007					LCN-Merosaa 00005	ηn	lorooctane :ic acid	
						ηŢ		
LCPFDA 00008						ηŢ		
LCPFDAA 00008								- 1
LCFFDSA 00008					LCPFDA 00008	I L	oic acid	
LOFFHPA_00008					LCFFLOA UUUU8	n i	- 1	
CPEFH9A 00008					LCPFDSA 00002	'n,	- 1	
TCPFHASA 00003					LCPFHpA_00008	ηΠ	noic acid	
CPFHXS					LCPFHpsA 00003	ηŢ		952
CPFHXS-br_00004   200 uL Perfluoroneanoic acid (PFNA)					LCPFHxA 00007	ηŢ		$\vdash$
CCPFNA 00009   C0 uL Perfluoronanoic acid (PFNA)   1					LCPFHxS-br_00004	ηΓ	esulfonic acid	
CPFFOA 00003						T	7.5	
LCPFOA 00009   200 uL   Perfluoroctanoic acid (PFOA)   1     LCPFOS						3 1	Fon-in-	1 9
CCPFOSA 00004						uL	acid	
CCPFOSA 00010   200 uL Perfluoroctane Sulfonamide   1					LCPFOS-br_00004	ηŢη	fonic.	
LCPFPGA 00010								- 1
LCFFPeA 0000						ı u	Sultonamide	- 1
LOFFPes 00003					LCPFPeA 00007	ηΓ		-
LCFFTDA 00006   200 uL Perfluorotetradecanoic acid   LCFFTDA 00006   200 uL Perfluorotridecanoic acid   LCFFTDA 00007   200 uL Perfluoroundecanoic acid   LCFFUDA 00007   200 uL Perfluorondecanoic acid   LCFFUDA 00007   200 uL Perfluoropexane   LCFFUDA 00007   200 uL Perfluoropexane   LCFFUDA 00007   200 uL Perfluoropexane   LCFFUDA 00007   200 uL Perfluoroctane   200 uL Perfluoro					LCPFPes 00003	ηĪ	nesulfonic acid	886
LOFFTEDA 00006   200 uL Perfluorotridecanoic acid   LOFFTEDA 00007   200 uL Perfluoroundecanoic acid   LOFFUGA 00007   200 uL Perfluoroundecanoic acid   LOFFUGA 00007   200 uL Perfluoroundecanoic acid   LOFFUGA 00007   Sodium   LOFFUGA 00007   Sodium   LOFFUGA 00007   Sodium   LOFFUGA 00007   LOFFUG					LCPFTeDA 00006	μĪ	decanoic acid	- 1
MELLINGTON, Lot 42FTS1216					LCPFTrDA_00006	ηĪ	canoic acid	- 1
WELLINGTON, Lot 42FTS1216 (Purchased Reagent)   Sodium   46.7					00007	:00 uL	anoic acid	
Sulfonate (4:2)   Sulfonate (4:2)   WELLINGTON, Lot 62FTS0616   CPurchased Reagent)   Sodium   47.4   Sodium   14.2H-perfluorooctane   Sodium   14.2H-perfluorooctane   Sodium   Sodium   14.2H-perfluorooctane   Sodium   Sodium		ß	Lot 42FTS121	9			rfluorohexane	6.7
MELLINGTON, Lot 62FTSU616 (Purchased Reagent) Sodium 47.4  11,14,2H,2H-perfluorooctane	L	ľ						- 1
	06/25/21	×	Lot 62F	0			fluorooctane	

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				4	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	No Reagent ID Ac	Volume Added	Analyte	Concentration
LC8:2FTS_00003	08/22/21	WEL	WELLINGTON, LOT 82FTS0816	- 9	(Purchased Reagent)	Sodium 1H,1H,2H,2H-per sulfonate (8:2)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCN-EtFOSAA_00004	09/30/21	WELLI	WELLINGTON, Lot NEtFOSAA091	116	(Purchased Reagent)	N-ethyl perfluorod	N-ethyl perfluorooctane	50 ug/mL
LCN-MeFOSAA_00005	10/12/21	WELLI	WELLINGTON, Lot NMeFOSAA0916	116	(Purchased Reagent)	N-methyl sulfonamic		50 ug/mL
ICPFBA 00007	05/27/21	Wellingto	Wellington Laboratories, Lot PE	Lot PFBA0516	(Purchased Reagent)	Perfluoro]	Perfluorobutyric acid	50 ug/mL
LCPFBS_00008	03/15/21	Wellingtor	Lot	LPFBS0316	(Purchased Reagent)	Perfluoro (PFBS)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	05/29/22	Wellington	, Lot	PFDA0517	(Purchased Reagent)	Perfluorodecanoic	decanoic acid	50 ug/mL
	05/29/22	Wellingtor	Wellington Laboratories, Lot PF	ot PFDoA0517		Perfluoro	Perfluorododecanoic acid	20 ng/mL
ICPFDSA 00002	05/24/21	Wellington	Lot	LPFDS0516	(Purchased Reagent)	Perfluoro	Perfluorodecane Sulfonic acid	
ICPFHpA_00008	12/02/21	Wellingtor	Wellington Laboratories, Lot PF	PFHpA1216	(Purchased Reagent)	Perfluoro    (PFHpA)	Perfluoroheptanoic acid (PFHpA)	50 ug/mL
LCPFHpSA_00003	09/01/22	Wellington	Wellington Laboratories, Lot LPF	Lot LPFHpS0817	(Purchased Reagent)	Perfluoro	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00007	12/22/20	Wellingtor	Wellington Laboratories, Lot PF	Lot PFHxA1215	(Purchased Reagent)	Perfluorohexanoic	acid	50 ug/mL
LCPFHxS-br_00004	07/03/20	Wellington	Wellington Laboratories, Lot brPFHxSK061	FHXSK0615	(Purchased Reagent)	Perfluorol (PFHxS)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA 00009	07/20/22	Wellingto	Wellington Laboratories, Lot PF	PFNA0717	(Purchased Reagent)	Perfluoro	Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS 00003	09/27/22	Wellingtor	1	Lot LPFNS0917		Perfluoro	Perfluorononanesulfonic acid	
LCPFOA_00009	09/27/22	Wellingto	١.	Lot PFOA0917	(Purchased Reagent)	Perfluorooctanoic	acid (	20 ng/mL
ICPFOS-br_00004	10/14/20	Wellington	Wellington Laboratories, Lot brPFOSK1015	FOSK1015	(Purchased Reagent)	Perfluoro	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00010	09/30/21	Wellington	Laboratories, I	Lot FOSA0916I	(Purchased Reagent)	Perfluoro	Perfluorooctane Sulfonamide	20 ng/mL
LCPFPeA 00007	05/31/21	Wellington	Laboratories,	Lot PFPeA0516		Perfluoro	Perfluoropentanoic acid	20 ng/mL
$^{\circ}$	01/11/22	Wellington	Laboratories, Lot	FPeS0117		Perfluoro	Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA 00006	12/09/20	Wellington	Laboratories, Lot PFT	PFTeDA1215	(Purchased Reagent)	Perfluoro	Perfluorotetradecanoic acid	20 ng/mL
LCPFTrDA_00006	02/12/21	Wellington	Laboratories, Lot	PFTrDA0216	(Purchased Reagent)	Perfluoro	Perfluorotridecanoic acid	20 ng/mT
LCPFUdA_00007	10/18/21	Wellington	Laboratories, Lot	PFUdA1016	(Purchased Reagent)	Perfluoro	Perfluoroundecanoic acid	50 ug/mL
LCPFC LL1 00006	11/18/18	06/05/18 Med	MeOH/H20, Lot 90285	200 mL	LCMPFC ALL SU 00075	10 mL d3-NMeFosaa	AA	2.5 ng/mL
I I					   	d5-NEtFOSAA	AA	
						M2-6:2FTS		2.375 ng/mL
						M2-8:2FTS		2.395 ng/mL
						13C2-PFHxDA	DA	
						13CZ-PFOA		
						13C2-PFTeDA	DA	2.5 ng/mL
						13C4-PFHPA	A	2.5 ng/mL
						13C5-PFPeA	A	2.5 ng/mL
						13C4 PFBA		2.5
						- 1	A	2.5 ng/mL
						- 1	A	
							Ω	
						13C3 FFNA		Z.5 ng/mL
	_	_		_	_	LSC4 FFUA		TIII / BII C - Z

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Respect IF   Early   Early   Volume					() () () ()	Parent Reagent			
127.05716   07.037   127.05716   127.05717   127.057		Exp	Prep	Dilutant	Final		Volume	. ,	-
130 PROS   2.33	Reagent ID	Date	Date	Used	Volume		Added		Concentration
12/05/18   06/05/18   13/22 PRIDA   19/25								13C4 PFOS	2.39 ng/mL
18.14   24   24   24   24   24   24   24								13C2 PFUnA	
11/205/18   Methanol, Lot Baker   200 mL   10/205/18   Methanol, Lot Baker   200 mL   200 m						LCPFCSP_00151			
11,11,21,21,21,21,21,21,21,21,21,21,21,2								sulfonate (4:2)	
11/14/14   14   14   14   14   14   14								Sodium 1H,1H,2H,2H-perfluorooctane	
11/05/18   Methanol, Lot Baker   200 mL Lod3-WWePOSA, 00008   Perfluorocetane   0.025								Sodium	0.02395 ng/mL
Nethyle Petitoroccare   Neth								1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
N=nethy/ performed catched   0.025								N-ethyl perfluorooctane	0.025 ng/mL
Perfilosobutyric acid								N-methyl perfluorooctane	
Perfluoroberanication   Perfluoroberanication   0.0221								sultonamidoacetic acid	
Perfilosocdecanolc acid   0.025								υ. Ο	0.0221 ng/mL
Perfluorodecanolic acid   0.023   Perfluorodecanolic acid   0.023   Perfluorodecanolic acid   0.023   Perfluorodecano sulfonic acid   0.023   Perfluorodecano sulfonic acid   0.023   Perfluorodecanosulfonic acid   0.023   Decanosic acid   0.023   Decano									0.025 ng/mL
Perfluorodecane Sulfonic acid 0.0241								Perfluorododecanoic acid	0.025 ng/mL
Perflucrobeptanoic acid   Perflucrobeptanoic acid   Perflucrobeptanoic acid   Perflucrobeptanosulfonic acid   Perflucrobexanoic acid   Perflucrobexanoic acid   Perflucrobexanoic acid   Perflucrobexanoic acid   Perflucrobexanoic acid   Perflucrocanonoic acid   Dicka-8:12FS 00000   200 ul M2-6:12FS 00000   141039   141039   1CAS-REPRAS 00010   200 ul M2-6:12FS 00000   1CAS-PERPAS   1CAS-PERPAS 00010   200 ul M2-6:12FS 00000   1CAS-PERPAS   1CAS-PERP									0.0241 ng/mL
The part   Perfluction   Per								Perfluoroheptanoic acid	0.025 ng/mL
Perfluctoriorancia caid   Perfluctoriorancia   Perf								(PFHpA)	0.0238 ng/mI.
Perfluctorexaments								) H I I I I I I	0.025 ng/mī
Colored   Colo								Lfonic	0.02275 ng/mL
Perfluoroctanica card (PPCA)								  	1m/22 700 0
Perfluoroccanol food								Porfluoronatanoi a ai d (BEON)	U.020 IIIG/IIILL
Perfluoronamesulfonic acid   Perfluoroctanesulfonic acid   DicM2FNEDA   DicM2FNEDA								Periluorooctanoic acid (FFUA)	0.025025 0.025025 0.027
12/05/18   06/05/18   Methanol, Lot Baker   Cd3-NMeFoSAA_00008   LCA2-NEFFOSAA_00008								Perfluorononanesulfonic acid	0.024 ng/mL
Perflucroctane Sulfonamide								Perfluorooctanesulfonic acid (PFOS)	0.0232 ng/mL
Perfluctopentanoic acid								Perfluorooctane Sulfonamide	0.025 ng/mL
12/05/18   Methanol, Lot Baker   Lcd3-NMeFOSAA_00008   200 uL   d3-NMeFOSAA   0.025									
12/05/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA   00008   200 uL   d3-NMeFOSAA   0.025     12/05/18   Methanol, Lot Baker   200 mL   LCd5-NEtFOSAA   0.008   200 uL   d5-NEtFOSAA   0.055     12/05/18   Methanol, Lot Baker   200 mL   LCd5-NEtFOSAA   0.008   200 uL   d5-NEtFOSAA   0.055     12/05/18   Methanol, Lot Baker   200 mL   LCd5-NEtFOSAA   0.005   LCM2-6:FTS   0.001   M2-6:2FTS   0.0475     12/05/18   Methanol, Lot Baker   200 mL   M2-6:2FTS   0.0475     12/05/18   M2-8:2FTS   0.016   200 uL   M2-8:2FTS   0.0475     12/05/18   M2-8:2FTS   0.0016   200 uL   M2-8:2FTS   0.0475     12/02/14   200 uL   M2-8:2FTS   0.005     13/02-PFDAA   0.055   LCM2PFPEA   0.0015   2.00 uL   M2-8:PFPEA   0.055     13/03-PFPEA   0.0015   2.00 uL   0.055     13/03-PFPEA   0.0015   2.00 uL   0.055     13/03-PFP								Perfluoropentanesulfonic acid	
12/05/18   06/05/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA_00008   200 uL   d3-NMeFOSAA_00008   200 uL   d3-NMeFOSAA_0005   0.055     141039								Perfluorotetradecanoic acid	0.025 ng/mL
12/05/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA   00008   200 uL   d3-NMeFOSAA   0.05     12/05/18   Methanol, Lot Baker   200 mL   LCd5-NEtFOSAA   00008   200 uL   d5-NEtFOSAA   0.05     LCM2-6:FTS   00008   200 uL   M2-6:2FTS   0.0475     LCM2-6:FTS   00016   200 uL   M2-8:2FTS   0.0475     LCM2-FFHXDA   00016   200 uL   13C2-FFHXDA   0.05     LCM2PFDA   00014   200 uL   13C2-FFTA   0.05     LCM2PFPA   00014   200 uL   13C3-FFPA   0.05     LCM4PFHPA   00014   200 uL   13C3-FFPA   0.05     LCM5PFPEA   00015   200 uL   13C3-FFPA   0.05   0.05     LCM5PFPEA   00015   200 uL   0.05   0.05   0.05     LCM5PFPEA   00015   200 uL   0.								Perfluorotridecanoic acid	0.025 ng/mL
14/1039		0 / 0 E / 1 0	06/05/19	M(+ + ) T () % ( + ) D ( ) L ( ) L	T	WW-SENT		+	10.05 11g/mT
08 200 uL d5-NEtFOSAA 0.05 200 uL M2-6:2FTS 0.0475 200 uL M2-8:2FTS 0.0479 200 uL 13C2-PFNADA 0.05 200 uL 13C2-PFTCA 0.05 200 uL 13C4-PFHAPA 0.05 200 uL 13C5-PFFPA 0.05		01/00/7	700/00	141039	7007	LCGS-MMer OSAA		_	1117 a dg/1111
200 uL M2-6:2FTS 0.0475 200 uL M2-8:2FTS 0.0479 200 uL 13C2-PFFADA 0.05 200 uL 13C2-PFTCDA 0.05 200 uL 13C4-PFFPADA 0.05 200 uL 13C5-PFFPADA 0.05						LCd5-NEtFOSAA 00008		$\rightarrow$	
200 ul M2-8:2FTS 0. 200 ul 13C2-PFHxDA 200 ul 13C2-PFTeDA 200 ul 13C2-PFTEDA 200 ul 13C3-PFPEDA 200 ul 13C3-PFPEDA						LCM2-6:FTS_00008		$\rightarrow$	
200 ul 13C2-PFH×DA 200 ul 13C2-PFOA 200 ul 13C2-PFHDA 200 ul 13C4-PFHDA 200 ul 13C5-PFPPA						LCM2-8:2FTS 00010		_	
4 200 uL 13C2-PFOA 4 200 uL 13C2-PFTeDA 200 uL 13C4-PFHPA 200 uL 13C5-PFPeA						LCM2PFHxDA 00016		_	0.05 ug/mL
4 200 ul 13CZ-PFTeDA 200 ul 13C4-PFHpA 200 ul 13C5-PFPeA						LCM2PFOA 00008		_	0.05 ug/mL
200 uL 13C4-F#HPA 0.05 200 uL 13C5-PFPeA 0.05						LCM2PFTeDA 00014		$\rightarrow$	0.05 ug/mL
100001						LCM4 FFHFA 00014	200 uL	_	0.05 ug/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent			
	Ę.	Ç	Reagent	yent	- 1			
Reagent ID	Exp Date	rrep Date	Used Volume	lal ume	Reagent ID Ad	Added	Analyte	Concentration
				LC	LCM8FOSA 00019 2	200 uL	13C8 FOSA	0.05 ug/mL
				IC	LCMPFBA_00015 2	ηŢ	13C4 PFBA	0.05 ug/mL
				LC	LCMPFBS_00008 2	200 uL	13C3-PFBS	0.0465 ug/mL
				IC		ηΓ		0.05 ug/mL
				IG	00015	ηľ		0.05 ug/mL
				IC	00022	ηŢ		
				IG	LCMPFHxS_00015 2	ηŢ	1802 PFHxS	0.0473 ug/mL
				IC	00015	200 uL		0.05 ug/mL
				I	00019	ηŢ		
				IC		ηŢ		
				ICC		200 uL	13C2 PFUnA	
LCd3-NMeFOSAA 00008	11/08/22	WEI	WELLINGTON, Lot d3NMeFOSAA1117		- 1		d3-NMeFOSAA	
LCd5-NEtFOSAA 00008	11/08/22	WEI	WELLINGTON, Lot d5NEtFOSAA1117		(Purchased Reagent)		d5-NEtFOSAA	20
1.1CM2_8:F1S_00008		TAT			(Purchased Reagent)		M2-8:2513	Tm/pr. 0 7/
STOOD ACCHEOLOGIC			Mellington Tehometomies Iot Modenwhan	717			13C0_DEH*DA	
TCM2PF0A 00010	02/12/21	WELLING	Wellington Laboratories, Tot M2PF0A0216	716	- 1		13C2 - FINALS 13C2-PFCA	- 1
LCM2PFTeDA 00014	11/30/22	Wellingto	Wellington Laboratories, Lot M2PFTeDA111	1117			13C2-PFTeDA	
LCM4PFHPA 00014	05/03/22	Wellingt	Wellington Laboratories, Lot M4PFHpA051	517	1		13C4-PFHpA	
LCM5PFPEA_00015		Wellingt	Wellington Laboratories, Lot M5PFPeA071	717	1		13C5-PFPeA	
LCM8FOSA 00019	10/11/22	Wellingt	Lot	17I	1		13C8 FOSA	50 ug/mL
LCMPFBA 00015	02/16/23	Welling		18			13C4 PFBA	50 ug/mL
LCMPFBS 00008	02/15/23	Welling		218	(Purchased Reagent)		13C3-PFBS	46.5 ug/mL
LCMPFDA_00020	02/16/23	Welling	Wellington Laboratories, Lot MPFDA0218	18	(Purchased Reagent)		13C2 PFDA	50 ug/mL
LCMPFDoA 00015	02/16/23	Welling	Wellington Laboratories, Lot MPFDoA0218	218	(Purchased Reagent)		13C2 PFDoA	50 ug/mL
LCMPFHxA_00022	10/27/22	Welling.		017				50 ug/mL
LCMPFHxS_00015	03/22/23	Welling		318				47.3 ug/mL
LCMPFNA_00015	12/14/22	Welling		17	(Purchased Reagent)		13C5 PFNA	50 ug/mL
LCMPFOA 00019	05/04/23	Welling	- 1	18	(Purchased Reagent)			50 ug/mL
LCMPFOS 00027	02/15/23	Welling	- 1	18			13C4 PFOS	47.8 ug/mL
LCMPFUdA_00017	11/22/21	Welling	ot MPFUdAí		(Purchased Reagent)		13C2 PFUnA	
.LCPFCSP_00151	11/18/18	05/17/18	05/17/18 Methanol, Lot 090285 10	10 mL	LCPFCSP_00148 2	200 uL	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	0.00934 ug/mL
								0.00948 ug/mL
							1H, 1H, 2H, 2H-perfluorooctane	
						-1		0 00958 110/mT.
							1H, 1H, 2H, 2H-perfluorodecane	
							Sullouder (0:2)	
							N-etnyl periluorooctane sulfonamidoacetic acid	Tm/bn TO:0
							N-methyl perfluorooctane	0.01 ug/mL
						-1	Perfluorobiitaric acid	0 01 11cr/mT.
							Perfluorobutanesulfonic acid	
							(PFBS)	- 1
							Perfluorodecanoic acid	- 1
	_					_	Perfluorododecanoic acid	0.01 ug/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					Parent Reagent	+-		
		1		Reagent	- 1	- 1		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Perfluorodecane Sulfonic acid	0.00964 ug/mL 0.01 ug/mL
							(FFHpA) Perfluoroheptanesulfonic acid	0.00952 ug/mL
							Perfluorohexanoic acid	0.01 ug/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0091 ug/mL
							Perfluorononanoic acid (PFNA)	0.01 ug/mL
							Perfluorooctanoic acid (PFOA)	
							Perfluorononanesulfonic acid	
							Perfluorooctanesulfonic acid (PFOS)	0.00928 ug/mL
							Perfluorooctane Sulfonamide	0.01 ug/mL
							Perfluoropentanoic acid	0.01 ug/mL
							Perfluoropentanesulfonic acid	0.00938 ug/mL
							Perfluorotetradecanoic acid	
							Perfluorotridecanoic acid	
		$\dashv$					Perfluoroundecanoic acid	
LCPFCSP_00148	11/18/18	05/17/18	Methanol, Lot 090285	10 mL	LC4:2FTS_00005	100 uL	Sodium	0.467 ug/mL
							<pre>1H,1H,2H,2H-perfluorohexane sulfonate (4:2)</pre>	
					LC6:2FTS 00007	100 uL	Sodium	0.474 ug/mL
					1		1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	
					T.C8:2FTS 00007	100 11T.	Sodium	0.479 mg/mT,
							1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2)	)
					LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCbr-NMeFOSAA_00001	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
					LCPFBA_00008	100 uL	Perfluorobutyric acid	0.5 ug/mL
					LCPFBS_00009	100 uL	Perfluorobutanesulfonic acid	0.442 ug/mL
				1	LCPFDA 00008	100 uL	(FEBS) Perfluorodecanoic acid	0.5 ug/mL
					LCPFDOA 00008	100 uL	Perfluorododecanoic acid	0.5 ug/mL
					LCPFDS_00008	100 uL	Perfluorodecane Sulfonic acid	0.482 ug/mL
					LCPFHpA_00011	100 uL	Perfluoroheptanoic acid (PFHpA)	0.5 ug/mL
					LCPFHpSA 00003	100 uL	Perfluoroheptanesulfonic acid	0.476 ug/mL
				•	LCPFHxA 00010	100 uL	Perfluorohexanoic acid	0.5 ug/mL
					LCPFHxS-br_00006	100 uL	Perfluorohexanesulfonic acid (PFHxS)	0.455 ug/mL
					LCPFNA_00010	100 uL	acid	
						100 uL	Periluorononanesultonic acid	
					LCFFOA UUUII	100 uL	Feriluorooctanoic acid (FFUA)	
					TCFF08-Br_0000 /	T0.0 0F	Feriluorooctanesulionic acid (PFOS)	0.464 ug/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

				, C	Parent Reagent		
	о х Б	Prep	Dilutant	Final	Volume	3.6	
Reagent ID	Date	Date	Used	Volume	Reagent ID Added	d Analyte	Concentration
					LCPFOSA 00013 100	ul Perfluorooctane Sulfonamide	0.5 ug/mL
					LCPFPeA_00008 100	ul Perfluoropentanoic acid	0.5 ug/mL
						ηΓ	0.469 ug/mL
					80000	ηΓ	
					M 00008	ηΓ	N
					LCPFUdA_00008 100	uL Perfluoroundecanoic acid	0.5 ug/mL
LC4:2FTS_00005	12/12/21		WELLINGTON, Lot 42FTS1216		(Purchased Reagent)	Sodium 1H, 1H, 2H, 2H-perfluorohexane sulfonate (4:2)	46.7 ug/mL
LC6:2FTS_00007	04/20/22		WELLINGTON, Lot 62FTS0417		(Purchased Reagent)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00007	12/12/21		WELLINGTON, Lot 82FTS1216		(Purchased Reagent)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
ICbr-NEtFOSAA_00001	01/17/23	ME	WELLINGTON, Lot brNEtFOSAA011	18	(Purchased Reagent)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
ICbr-NMeFOSAA_00001	01/17/23	ME	WELLINGTON, Lot brNMeFOSAA0118	18	(Purchased Reagent)	N-methyl perfluorooctane sulfonamidoacetic acid	Tm/bn 05
LCPFBA 00008	05/29/22	Welli	Wellington Laboratories, Lot PFB	PFBA0517	(Purchased Reagent)	Perfluorobutyric acid	50 ug/mL
ICPFBS_00009	09/21/22	Wellin	Lot	LPFBS0917	1	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA 00008	05/29/22	Welli	Wellington Laboratories, Lot PFD	PFDA0517	(Purchased Reagent)	Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22	Wellir	Lot	PFDoA0517	1	Perfluorododecanoic acid	
LCPFDS_00008	11/08/22	Wellir	Lot	DS1117		Perfluorodecane Sulfonic acid	48.2 ug/mL
ICPFHpA_00011	09/27/22	Wellin	Wellington Laboratories, Lot PFHp	PFHpA0917	(Purchased Reagent)	Perfluoroheptanoic acid  (PFHpA)	1m/bn 05
	09/01/22	Wellin		pS0817	- 1	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellir	, Lo	<a0917< td=""><td>- 1</td><td></td><td></td></a0917<>	- 1		
ICPFHxS-br_00006	01/04/22	Welling	ot	brPFHxSK0117		fonic	
LCPFNA_00010	07/20/22	Welli	Wellington Laboratories, Lot PFN	PFNA0717	(Purchased Reagent)	Perfluorononanoic acid (PFNA) Perfluorooctanoic acid (PFOA)	50 ug/mL 0.05 ug/mL
LCPFNS 00003	09/27/22	Wellir	Wellington Laboratories, Lot LPFNS091	NS0917	(Purchased Reagent)	fonic	48 ug/mL
LCPFOA_00011	09/27/22	Welli	Ι.	PFOA0917	1	$\sim$	
LCPFOS-br_00007	01/12/22	Welling	Wellington Laboratories, Lot brPFOSK011	OSK0117	(Purchased Reagent)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00013	09/01/22	Wellir	Wellington Laboratories, Lot FOSA0817I	40817I	(Purchased Reagent)	Perfluorooctane Sulfonamide	50 ug/mL
ICPFPeA 00008	06/14/22	Wellir	Wellington Laboratories, Lot PFPeA0617	SA0617	(Purchased Reagent)	Perfluoropentanoic acid	50 ug/mL
LCPFPes_00003	01/11/22	Wellington	Lot	eS0117		Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA_00008	09/30/21	Wellin	Wellington Laboratories, Lot PFTe	PFTeDA0916	(Purchased Reagent)	Perfluorotetradecanoic acid	20 ng/mF
LCPFTrDA_00008	05/02/22	Wellin	Wellington Laboratories, Lot PFTr	PFTrDA0517	(Purchased Reagent)	Perfluorotridecanoic acid	20 ng/mF
ICPFUdA 00008	10/18/21	Wellir	Wellington Laboratories, Lot PFUc	PFUdA1016	(Purchased Reagent)	Perfluoroundecanoic acid	20 ng/mL
LCPFC_LL2_00004	08/20/18	02/22/18	02/22/18 MeOH/H2O, Lot 090285	200 mL	LCMPFC_ALL_SU_00041 10	10 mL d3-NMeFOSAA	
						d5-NEtFOSAA	2.5
						M2-6:2FTS	375
						M2-8:2FTS	
						13CZ-FFHXDA	7.5 ng/mL
_	_		_		_	TO(4-F.O.	Till / Sir C • 7

Lab Name: TestAmerica Sacramento

SDG No.:

Job No.: 320-39023-1

Ē				4	Parent Reagent	ٔ ۲		
Reagent ID Da	Exp Date	Prep Date	Dilutant Used	Final	Reagent ID	Volume Added	Analyte	Concentration
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
								2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
								2.5 ng/mL
								2.365 ng/mL
							13C4 PFOS	2.39 ng/mL
							13C2 PFUnA	2.5 ng/mL
					LCPFCSP_00136	100 uL	Sodium	0.0467 ng/mL
							IH, IH, ZH, ZH-periluoronexane	
								0.0474 ng/mL
							1H,1H,2H,2H-perfluorooctane	
							sulfonate (6:2)	
							Sodium	0.0479 ng/mL
							1H, 1H, 2H, 2H-perfluorodecane	
							sulfonate (8:2)	
							N-ethyl perfluorooctane	0.05 ng/mL
							sulfonamidoacetic acid	
							N-methyl perfluorooctane	0.05 ng/mL
							Perfluorobutanesulfonic acid	0.0442 ng/mL
							(FFBS)	
							Periluorodecanoic acid	
								1.00 ng/mī
							Dorfliovohontanoi a acia	0.0482 IIG/IIII
							(PFHDA)	
							Perfluoroheptanesulfonic acid	0.0476 ng/mL
							Perfluorohexanesulfonic acid	
							(PFHxS)	
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluorononanesulfonic acid	0.048 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05 ng/mL
							Perfluorooctanesulfonic acid	0.0464 ng/mL
							(PFOS)	
							Perfluorooctane Sulfonamide	0.05 ng/mL
							Perfluoropentanoic acid	0.05 ng/mL
							Perfluoropentanesulfonic acid	0.0469 ng/mL
							Perfluorotetradecanoic acid	0.05 ng/mL
							Perfluorotridecanoic acid	0.05 ng/mI.

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

Company   Comp					4	Parent Reagent	1.)		
08/20/18   02/20/18   button   1.0t Baker   200 mL LCd3-WReF0SBA_00006   200 uL d3-NBR50SBA_00006   200 uL d3-NBR50SBA_0006   200 uL d3-NBR50SBA_0006   20		Exp Date	Prep Date		inal inal		Volume Added	Analyte	Concentration
0.0   0.720/19   0.0									
Control   Cont	.LCMPFC_ALL_SU_00041	08/20/18	1	Lot Baker	mL	LCd3-NMeFOSAA_00006	1	d3-NMeFOSAA	
Control				かつ O H # H		LCd5-NEtFOSAA 00006		_	
TOWARD   T						LCM2-6:FTS 00006		+-	
CONTRIBUTION   CONT					1	LCM2-8:2FTS 00008		+-	
Continue					1	LCM2PFHxDA 00013		+-	
Continue					1	LCM2PFOA 00008		_	
TOWN TRANSPERSON TOWN TOWN TRANSPERSON TOWN TOWN TRANSPERSON TOWN TOWN TRANSPERSON TRANSPERSON TOWN TRANSPERSON TRANSPERSON TOWN TRANSPERSON TRANSPE					1	LCM2PFTeDA 00012		+	
CAMPAND   CAMP						LCM4PFHPA 00012		-	
						LCM5PFPEA 00013		_	
CACRPERA 00015   200 ul 363-FERA 0.0066   0.0045   0.00						LCM8FOSA 00016		+	
CAMPERS 000105   200 uL 13C2 PEPDA 0.006   0.0073   0.000   0.0073   0.000   0.0073   0.000   0.0073						LCMPFBA 00013		_	
CAMPENS   COURT   LICKPENS   LICKPENS   COURT   LICKPENS   COURT   LICKPENS   LICKPENS   COURT   LICKPENS   LICKPENS								-	
						LCMPFDA_00018		13C2	
						LCMPFDoA 00013		13C2	
CORPTON   CONTINUE						LCMPFHxA_00019		13C2	
17.08122   WELLINGTON, Lot d3NMePOSAA0517   LOCHPERA 00013   200 uL 1364 PPOA 0.0077   0.05						LCMPFHxS_00013		1802	
1/09/22						LCMPFNA 00013		13C5	
1006   05/19/22   WELLINGTON, Lot d3NN&FOSAAO517   TOMPEDA 00014   200 ul 13C4 PPCS   0.0478   0.05     1007   1007   1007   100								13C4	
					1	LCMPFOS 00025		13C4	1
10.08/22   WELLINGTON, Lot d3NMeFCSAA117   (Purchased Reagent)   d3-NMeFCSAA     0.05/17/22   WELLINGTON, Lot d3NMeFCSAA117   (Purchased Reagent)   d2-NMeFCSAA     0.07/17/22   WELLINGTON, Lot M32ETSO3/17   (Purchased Reagent)   M2-612FTS     0.07/105/22   WELLINGTON, Lot M32ETSO3/17   (Purchased Reagent)   M2-612FTS     0.07/13/22   WELLINGTON Laboratories, Lot M2PFPADA7/17   (Purchased Reagent)   J3C2-PFDA     0.07/13/22   WELLINGTON Laboratories, Lot M2PFPADA7/17   (Purchased Reagent)   J3C2-PFDA     0.07/20/22   WELLINGTON Laboratories, Lot M3PFPADA7/17   (Purchased Reagent)   J3C3-PFPBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PFPADA7/17   (Purchased Reagent)   J3C3-PFPBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PFPADA7/17   (Purchased Reagent)   J3C3-PFPBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PPBADA7/17   (Purchased Reagent)   J3C3-PFPBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PPBADA7/17   (Purchased Reagent)   J3C3-PFBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PPBADA7/116   (Purchased Reagent)   J3C3-PFBA     0.07/20/22   WELLINGTON Laboratories, Lot M3PPBADA7/116   (Purchased Reagent)   J3C3-PFBA     0.07/20/22   WELLINGTON LABORATORIES, LOT					1	LCMPFUdA 00014		+	
11/08/22   WELLINGTON, Lot d5NEFEOSAA117   (Purchased Reagent)   M2-6:2ETS	LCd3-NMeFOSAA 00006	05/19/22	WELL	١.		ರ	nt)	d3-NMeFOSAA	50 ug/mL
02/17/22   WELLINGTON Lot M26FES017   (Purchased Reagent)   M2-6:2FTS	LCd5-NEtFOSAA 00006	_	WELL	Lot d5NEtF(			nt)	d5-NEtFOSAA	50 ug/mL
1130/22   Wellington Laboratories, Lot M2PFRADA17   (Purchased Reagent)   M2-8:2FFRADA	LCM2-6:FTS 00006	02/11/22	ME	LLINGTON, Lot M262FTS0217			nt)	M2-6:2FTS	
1302   Per   1302   Per   1302   Per   Per	LCM2-8:2FTS 00008	07/05/22	ME	LLINGTON, Lot M282FTS0717		1	nt)	M2-8:2FTS	
12	LCM2PFHxDA_00013	07/13/22	Wellingtor	Lot	A0717		nt)	13C2-PFHxDA	
1/30/22   Wellington Laboratories, Lot M2PFFeDAll17   (Purchased Reagent)   13C4-PFFDA	LCM2PFOA 00008	02/12/21	Wellingto	on Laboratories, Lot M2PFO?	0216		nt)	13C2-PFOA	50 ug/mL
2	LCM2PFTeDA 00012	11/30/22	Wellingtor	n Laboratories, Lot M2PFTeI	A1117		nt)	13C2-PFTeDA	50 ug/mL
3	LCM4PFHPA 00012	05/03/22	Wellingto	ı	A0517	1	nt)	13C4-PFHpA	
10/11/22   Wellington Laboratories, Lot MPFBA0417   (Purchased Reagent)   13C8 FOSA     10/12/22   Wellington Laboratories, Lot MPFBA0417   (Purchased Reagent)   13C4 FPBA     13C4 PEPBA   13C2 PFBA     13C4 PEPBA   13C2 PFBA     13C5 4/22   Wellington Laboratories, Lot MPFBA017   (Purchased Reagent)   13C2 PFDA     10/27/22   Wellington Laboratories, Lot MPFHXA1017   (Purchased Reagent)   13C2 FFHXA     10/27/22   Wellington Laboratories, Lot MPFHXA1017   (Purchased Reagent)   13C2 FFHXA     10/17/22   Wellington Laboratories, Lot MPFHXA017   (Purchased Reagent)   13C4 PFDA     10/17/22   Wellington Laboratories, Lot MPFHXA1017   (Purchased Reagent)   13C5 FFNA     10/17/22   Wellington Laboratories, Lot MPFDA1017   (Purchased Reagent)   13C4 PFDA     10/17/22   Wellington Laboratories, Lot MPFDA1017   (Purchased Reagent)   13C2 FFUA     10/17/22   Wellington Laboratories, Lot MPFDA1017   (Purchased Reagent)   13C2 FFUA     11/22/21   Wellington Laboratories, Lot MPFUAN116   (Purchased Reagent)   13C2 FFUA     11/22/21   Wellington Laboratories, Lot MPFUAN116   (Purchased Reagent)   13C2 FFUA     11/22/21   Wellington Laboratories, Lot MPFUAN116   (Purchased Reagent)   14/14/2H-Pperfluorobexane     11/22/21   Wellington Laboratories, Lot MPFUAN14   (Purchased Reagent)   14/14/2H-Pperfluorobexane   14/14/2H-Pperfluorobexane   14/14/2H-Pperfluorobexane   14/14/2H-Pperfluorobexane   14/14/2H-Pperflu	LCM5PFPEA_00013	07/20/22	Wellingto	Lot	A0717		nt)	13C5-PFPeA	
04/12/22         Wellington Laboratories, Lot MPFBA0417         (Purchased Reagent)         13C4 PFBA           05/23/22         Wellington Laboratories, Lot MPFDA0717         (Purchased Reagent)         13C3-PFBS           07/13/22         Wellington Laboratories, Lot MPFDA0517         (Purchased Reagent)         13C2 PFDAA           05/23/22         Wellington Laboratories, Lot MPFHXS0217         (Purchased Reagent)         13C2 PFDAA           09/30/21         Wellington Laboratories, Lot MPFHXS0217         (Purchased Reagent)         13C5 PFNAA           09/30/21         Wellington Laboratories, Lot MPFA0106         (Purchased Reagent)         13C5 PFNAA           10/17/22         Wellington Laboratories, Lot MPFA01017         (Purchased Reagent)         13C4 PFOA           10/17/22         Wellington Laboratories, Lot MPFA01017         (Purchased Reagent)         13C4 PFOA           10/17/22         Wellington Laboratories, Lot MPFOA1017         (Purchased Reagent)         13C4 PFOA           11/22/21         Wellington Laboratories, Lot MPFUGA1116         (Purchased Reagent)         13C4 PFOA           11/22/21         Wellington Laboratories, Lot MPFUGA1116         (Purchased Reagent)         13C4 PFOA           08/20/18         Oz/20/18         Methanol, Lot 090285         1000 uL LCPFCSP_00132         1 mL Sodium	LCM8FOSA_00016	10/11/22	Wellingto	on Laboratories, Lot M8FOSA	1017I		nt)	13C8 FOSA	
05/24/22   Wellington Laboratories, Lot MPFDA0717   (Purchased Reagent)   13C3-PFBS     07/13/22   Wellington Laboratories, Lot MPFDA0717   (Purchased Reagent)   13C2 PFDA     05/23/22   Wellington Laboratories, Lot MPFHA1017   (Purchased Reagent)   13C2 PFHXA     05/23/22   Wellington Laboratories, Lot MPFHA3017   (Purchased Reagent)   13C2 PFHXA     05/21/7/22   Wellington Laboratories, Lot MPFNA0916   (Purchased Reagent)   13C3 PFNA     10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1016   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA     11/22/21   Welli	LCMPFBA_00013	04/12/22	Wellingt	on Laboratories, Lot MPFBA	0417		nt)	13C4 PFBA	
07/13/22   Wellington Laboratories, Lot MPFDA0717   (Purchased Reagent)   13C2 PFDA	LCMPFBS 00006	05/24/22	Wellingto		:0815		nt)	13C3-PFBS	
1322 PFD0A   1323 PFD0A   14,14,24,24-perfluoroctane   14,14,	LCMPFDA_00018	07/13/22	Wellingt		0717	- 1	nt)		
10/27/22   Wellington Laboratories, Lot MPFHxA1017   (Purchased Reagent)   13C2 PFHxA   1802 PFHxS   1802 P	LCMPFDoA_00013	05/23/22	Wellingto		0517		nt)		
02/17/22   Wellington Laboratories, Lot MPFHxSO217   (Purchased Reagent)   1802 PFHxS     09/30/21	LCMPFHxA_00019	10/27/22	Wellingto		1017		nt)		
1302 PFNA   1305 PFNA   1305 PFNA   1305 PFNA   1305 PFNA   1305 PFNA   1307	LCMPFHxS_00013	02/11/22	Wellingto		:0217		nt)	1802 PFHxS	
10/17/22   Wellington Laboratories, Lot MPFOA1017   (Purchased Reagent)   13C4 PFOA	LCMPFNA_00013	09/30/21	Wellingt		0916		nt)	13C5 PFNA	
10/17/22   Wellington Laboratories, Lot MPFOS1017   (Purchased Reagent)   13C4 PFOS	LCMPFOA_00017	10/17/22	Wellingt		1017		nt)	13C4 PFOA	
11/22/21   Wellington Laboratories, Lot MPFUGA1116   (Purchased Reagent)   13C2 PFUnA	LCMPFOS_00025	10/17/22	Wellingt		1017		nt)		∞.
08/20/18   02/20/18   Methanol, Lot 090285   10000 uL   LCPFCSP_00132	LCMPFUda_00014	11/22/21	Wellingto	MPF		eq	nt)		
	.LCPFCSP_00136	08/20/18	02/20/18			LCPFCSP_00132	1 mL		
								<pre>LH, LH, ZH, ZH-pertluoronexane   sulfonate (4:2)</pre>	
								Sodium	0.0948 ug/mL
								1H, 1H, 2H, 2H-perfluorooctane	1

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

03 03 03 03 00 00 00 00 00 00 00 00 00 0	Readent ID	Volume Added Analyte	
1D	Reagent ID		
08/20/18 02/20/18 Methanol, Lot 090285 10000 ul LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00004  LCN-EEFOSAA_00005  LCN-PEFDA_00005	•		Concentration
08/20/16 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003 LC6:2FTS_00003 LC8:2FTS_00003 LCN-EFPOSAA_00005		Sodium 1H,1H,2H,2H-perfluorodecane	0.0958 ug/mL
08/20/18   02/20/18   Methanol, Lot 090285   10000 ul   LC4:2FTS_00003   LC6:2FTS_00003   LC8:2FTS_00003   LC8:2FTS_00003   LC8:2FTS_00004   LCN-EtFOSAA_00005   LCN-E		Sulformer (0.2) N-ethyl perfluorooctane sulfonamidoacetic acid	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005  TOPERA 00007		N-methyl perfluorooctane	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003 LC6:2FTS_00003 LC8:2FTS_00003 LC8:2FTS_00004 LCN-EtFOSAA_00005		Perfluorobutyric acid	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003 LC6:2FTS_00003 LC8:2FTS_00003 LC8:2FTS_00004 LCN-EtFOSAA_00005		Perfluorobutanesulfonic acid	0.0884 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00004  LCN-EtFOSAA_00005		(FFBS) Perfluorodecanoic acid	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EFFOSAA_00005		Perfluorododecanoic acid	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003 LC6:2FTS_00003 LC8:2FTS_00003 LCN-EtFOSAA_00005		Perfluorodecane Sulfonic acid	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00004		Perfluoroheptanoic acid (PFHpA)	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EFFOSAA_00005		Perfluoroheptanesulfonic acid	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00004  LCN-MeFOSAA_00005			
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005  LCN-MeFOSAA_00005		Perfluorohexanesulfonic acid (PFH*S)	0.091 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005		Perfluorononanoic acid (PFNA)  Derfluorononanesulfonic acid	0.1 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003 LC6:2FTS_00003 LC8:2FTS_00003 LCN-EtFOSAA_00004			0.00 ug/mL
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00004		Lfonic	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005		(PFOS)	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005  LCN-MeFOSAA_00005		Perfluorooctane Sulfonamide	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005  LCN-MeFOSAA_00005		Perfluoropentanoic acid	- 1
08/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005		Perfluoropentanesulfonic acid	
08/20/18 02/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005		Perfluorotetradecanoic acid	
08/20/18 Methanol, Lot 090285 10000 uL LC4:2FTS_00003  LC6:2FTS_00003  LC8:2FTS_00003  LCN-EtFOSAA_00005  LCN-MeFOSAA_00005		Perfluorotridecanoic acid	0.1 ug/mL
US/20/18 Wethanol, Lot U90285 10000 ull LC4:ZFTS_00003  LC6:ZFTS_00003  LC8:ZFTS_00003  LCN-EtFOSAA_00005  LCN-MeFOSAA_00005	C C C C C C C C C C C C C C C C C C C	F	1.0
03	ur   LC4:2FTS_00003	200 uL Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	0.934 ug/mL
03		200 uL Sodium 1H,1H,2H,2H-perfluorooctane	0.948 ug/mL
000004			
000004		200 uL Sodium 1H,1H,2H,2H-perfluorodecane	0.958 ug/mL
00004		sulfonat	
00005		ηŢ	1 ug/mL
		200 uL N-methyl perfluorooctane sulfonamidoacetic acid	1 ug/mL
	LCPFBA 00007 2		1 ug/mL
LCPFBS_00008		200 uL Perfluorobutanesulfonic acid	0.884 ug/mL
TOPEDS OUT		200 iit. Derflingrodecandig acid	1 11Cr/mT.
α		3 5	
		2 5	0 964 119/mI.

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				Parent	Readent		
	C X E	٦ ٢	Reagent Rinal			a	
Reagent ID	Date	Date		Reagent I	Д	Analyte	Concentration
				LCPFHpA_00008	200	uL Perfluoroheptanoic acid (PFHpA)	1 ug/mL
				LCPFHpSA_00003	200	uL Perfluoroheptanesulfonic acid	0.952 ug/mL
				LCPFHxA_00007		ul Perfluorohexanoic acid	1 ug/mL
				LCPFHxS-br_00004	200	uL Perfluorohexanesulfonic acid (PFHxS)	0.91 ug/mL
				LCPFNA 00009	200 1	ul Perfluorononanoic acid (PFNA)	1 ug/mL
				LCPFNS_00003	1	uL Perfluorononanesulfonic acid	0.96 ug/mL
				LCPFOA 00009	200	uL Perfluorooctanoic acid (PFOA)	1 ug/mL
				LCPFOS-br_00004	200	uL Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
				LCPFOSA 00010	200 1	ul Perfluorooctane Sulfonamide	1 ug/mL
				LCPFPeA 00007			1 ug/mL
				LCPFPes 00003	200		0.938 ug/mL
					200		l ug/mL
				LCPFTTDA 00006	200	ul Pertluorotridecanoic acid	J ug/mL
SUUUU SHAC. NJI	10/10/01	ME	WEITTNEEDN ICT ACETS 1016	11.5	2007	-	4
	77 / 77			יונים (יונים)		1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
LC6:2FTS_00003	06/25/21	WE	WELLINGTON, Lot 62FTS0616	(Purchased	ed Reagent)	2H-	47.4 ug/mL
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						sulfonate (6:2)	-
LC8:2FTS_00003	08/22/21	WE	WELLINGTON, Lot 82FTS0816	(Purchased	ed Reagent)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCN-EtFOSAA_00004	09/30/21	MEL	WELLINGTON, Lot NEtFOSAA0916	(Purchased	ed Reagent)	N-ethyl perfluorooctane	50 ug/mL
10000 K K DOE - 3/4 T/40 H	0,00	1000	F		- 1	Sulfoliamitadacetic acid	F/
LCN-Merosaa_00005	10/17/21	THM THM	OSAA	(Purchased		N-methyl periluorooctane sulfonamidoacetic acid	
LCPFBA_00007	05/27/21	Wellingt	Lot		- 1	Perfluorobutyric acid	
LCPFBS_00008	03/15/21	Wellingt	Wellington Laboratories, Lot LPFBS0316			Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	_	Wellingt	Lot	(Purchased	ed Reagent)	Perfluorodecanoic acid	50 ug/mL
LCPFDoA_00008	05/29/22	Wellingt				Perfluorododecanoic acid	
ICPFDSA 00002	05/24/21	Wellingt			ed Reagent)	Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00008	12/02/21	Wellingt	Wellington Laboratories, Lot PFHpA1216			Perfluoroheptanoic acid (PFHpA)	50 ug/mL
LCPFHpSA_00003	09/01/22	Wellingto	Lot :	7   (Purchased		Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00007	12/22/20	Wellingt	Wellington Laboratories, Lot PFHxA1215	(Purchased		Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00004	07/03/20	Wellingtor	Wellington Laboratories, Lot brPFHxSK061	(Purchased	ed Reagent)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
ICPFNA_00009	07/20/22	Wellingt	Wellington Laboratories, Lot PFNA0717	(Purchased		Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS_00003	09/27/22	Wellingt	Wellington Laboratories, Lot LPFNS0917	(Purchased		Perfluorononanesulfonic acid	48 ug/mL
ICPFOA_00009	09/27/22	Wellingt	Wellington Laboratories, Lot PFOA0917	(Purchased		Perfluorooctanoic acid (PFOA)	50 ug/mL
ICPFOS-br_00004	10/14/20	Wellingto	Wellington Laboratories, Lot brPFOSK101	.5 (Purchased	ed Reagent)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
ICPFOSA 00010	09/30/21	Wellingt			ed Reagent)	Perfluorooctane Sulfonamide	50 ug/mL
ICPFPeA_00007	05/31/21	Wellingt	Wellington Laboratories, Lot PFPeA0516		(Purchased Reagent)	Perfluoropentanoic acid	50 ug/mL

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SDG No.:

	Concentration	46.9 ug/mL		50 ug/mL	20 ng/mL	2.5 ng/mL			2.395 ng/mL	2.5 ng/mL	2.5 ng/mL			2.5 ng/mL			2.5 ng/mL		2.5 ng/mL	2.5 ng/mL	2.39 ng/mL	2.5 ng/mL	0.0467 ng/mL		0.0474 ng/mL	0.0479 ng/mL		0.05 ng/mL	0.05 ng/mL	0 05 ng/mī.		- 1		0.0482 ng/mL	0.05 ng/mL	0.0476 ng/mL	0.05 ng/mL	0.0455 ng/mL
	Analyte	Perfluoropentanesulfonic acid	ijd	Perfluorotridecanoic acid	Perfluoroundecanoic acid	d3-NMeFOSAA	d5-NEtFOSAA	M2-6:2FTS	M2-8:2FTS	13C2-PFHxDA	13C2-PFOA	13C2-PFTeDA	13C4-PFHpA	1300-FFFEE	1300 FOSA	13C2 PFDA		1802 PFHxS	13C5 PFNA	13C4 PFOA	13C4 PFOS	13C2 PFUnA	Sodium	<pre>1H,1H,2H,2H-perfluorohexane sulfonate (4:2)</pre>	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6.2)	Sodium	1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2)	N-ethyl perfluorooctane sulfonamidoacetic acid	N-methyl perfluorooctane	Perfluorobuturic acid	Perfluorobutanesulfonic acid		Perfluorododecanoic acid	Perfluorodecane Sulfonic acid	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonic acid		Periluoronexanesulionic acid (PFHxS)
Parent Reagent	Reagent ID Added	(Purchased Reagent)		(Purchased Reagent)	(Purchased Reagent)	LCMPFC ALL SU 00075   10 mL	   																LCPFCSP_00151 1000 uL															
() () () () ()	Final Volume	LPFPeS0117	PFTeDA1215	:DA0216	PFUdA1016	200 mL I																	H															
	Dilutant Used	Laboratories, Lot	Laboratories, Lot	Wellington Laboratories, Lot PFTrDA0216	, Lot	06/05/18   MeOH/H2O, Lot 090285																																
	Prep Date	Wellington	Wellington	Wellingt	Wellingt	06/05/18																																
	Exp Date	01/11/22	12/09/20	02/12/21	10/18/21	11/18/18																																
	Reagent ID	LCPFPeS 00003	LCPFTeDA 00006	LCPFTrDA 00006	LCPFUda 00007	LCPFC LL2 00005	I I																															

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Job No.: 320-39023-1

					Parent Reagent	ц.		
	ŗ	ſ		Reagent		- 1		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Volume	Reagent ID	Volume	Analyte	Concentration
							Perfluorononanoic acid (PFNA)	0.05 ng/mL
							Perfluorooctanoic acid (PFOA)	0.05005 ng/mL
							Perfluorononanesulfonic acid	
							(PFOS)	
							Perfluorooctane Sulfonamide	0.05 ng/mL
							Perfluoropentanoic acid	0.05 ng/mL
							Perfluoropentanesulfonic acid	0.0469 ng/mL
							Perfluorotetradecanoic acid	0.05 ng/mL
							Perfluorotridecanoic acid	0.05 ng/mL
		-					Perfluoroundecanoic acid	0.05 ng/mL
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18 Met	Methanol, Lot Baker	200 mL	LCd3-NMeFOSAA_00008	200 uL	d3-NMeFOSAA	0.05 ug/mL
		1	)))))	-1	LCd5-NEtFOSAA 00008	200 uL	d5-NEtFOSAA	0.05 ug/mL
					LCM2-6:FTS 00008		M2-6:2FTS	
					LCM2-8:2FTS 00010		M2-8:2FTS	
					LCM2PFHxDA 00016	200 uL	13C2-PFHxDA	
					LCM2PFOA_00008	200 uL	13C2-PFOA	0.05 ug/mL
					LCM2PFTeDA_00014	200 uL	13C2-PFTeDA	
					LCM4PFHPA_00014	200 uL	13C4-PFHpA	0.05 ug/mL
					LCM5PFPEA_00015	200 uL	13C5-PFPeA	0.05 ug/mL
						200 uL	13C8 FOSA	0.05 ug/mL
						- 1	13C4 PFBA	0.05 ug/mL
						- 1		
					LCMPFDA 00020	200 uL		0.05 ug/mL
					LCMPFDoA 00015	200 uL	13C2 PFDoA	- 1
					LCMPFHxA 00022			
					LCMPFHxS 00015	- 1		
					- 1			
						200 uL		0.05 ug/mL
					LCMPFOS 00027		13C4 PFOS	- 1
	1				- 1	Z00 NT	13C2 PFUnA	
LCd3-NMeFOSAA 00008	<u> </u>	WELLINGTON,			- 1	int)	d3-NMeFOSAA	
LCGS-NETFOSAA UUUU8	<u> </u>	WELLINGTON,	IGTON, LOT ASNETFUSABILI			int)	α5-NETFOSAA *** C. STEG	200
LCMZ-6:FTS_00008	<u> </u>	METT	WELLINGTON, LOT MZ6ZFTSUZ18		- 1	int)	MZ-6:ZFT.S	2.
LCMZ-8:ZF"IS 00010	01/24/23	METTT	WELLINGTON, LOT MZ8ZFTSUIL8	7 7 0 1		int)	MZ-8:ZF"I'S	
LCMZPFHXDA 00016	07/13/22	Wellington I	Wellington Laboratories, Lot M2PFHXDAU/1	xDA0 / 1 /		int)	13C2-PFHXDA	
LCM2PFOA 00008	$\sim$	Wellington	Lot	OA0216	- 1	int)	13C2-PFOA	
LCM2PFTeDA_00014	11/30/22	Wellington 1		eDA1117	- 1	int)	13C2-PFTeDA	50 ug/mL
LCM4PFHPA_00014	05/03/22	Wellington	Lot	1pA0517	(Purchased Reagent	nt)	13C4-PFHpA	50 ng/mL
LCM5PFPEA_00015	07/20/22	Wellington	Wellington Laboratories, Lot M5PFPeA071	PeA0717	(Purchased Reagent)	int)	13C5-PFPeA	50 ug/mL
LCM8FOSA_00019	10/11/22	Wellington	Wellington Laboratories, Lot M8FOSA1017I	SA1017I	- 1	nt)	13C8 FOSA	50 ng/mL
LCMPFBA_00015	02/16/23	Wellington	Lot	3A0218		int)	13C4 PFBA	50 ug/mL
LCMPFBS_00008	02/15/23	Wellington	Wellington Laboratories, Lot M3PFI	M3PFBS0218	(Purchased Reagent)	int)	13C3-PFBS	46.5 ug/mL
LCMPFDA_00020	02/16/23	Wellington	Wellington Laboratories, Lot MPFDA0218	DA0218	(Purchased Reagent)	int)	13C2 PFDA	20 ng/mT
LCMPFDoA_00015	02/16/23	Wellington	Wellington Laboratories, Lot MPFDo	MPFDoA0218	(Purchased Reagent)	int)	13C2 PFDoA	20 ng/mL
LCMPFHxA_00022	10/27/22	Wellington	Lot	xA1017		int)		50 ug/mL
				0 0 0 0	1 . 1.			

Lab Name: TestAmerica Sacramento

SDG No.:

Reagent ID   Date   Date   Date		Final	N N	Volume		
12/14/22 05/04/23 02/15/23 7 11/22/21 11/18/18		Volume	Reagent ID A	Added	Analyte	Concentration
05/04/23 02/15/23 7 11/22/21 11/18/18 0		MPFNA1217	(Purchased Reagent)		13C5 PFNA	50 ug/mI
7 11/22/21 11/18/18 0		Lot MPFOA0418	1		13C4 PFOA	50 ug/mL
7 11/22/21 11/18/18 0 11/18/18 0	Wellington Laboratories, Lot MP	Lot MPFOS0218	(Purchased Reagent)		13C4 PFOS	47.8 ug/mL
11/18/18 0	Wellington Laboratories, Lot MPFUdA1116	FUdA1116			13C2 PFUnA	50 ug/mL
	05/17/18 Methanol, Lot 090285	닌	LCPFCSP_00148	200 ur	Sodium 1H,1H,2H,2H-perfluorohexane	0.00934 ug/mL
				1	I 01	0.00948 ug/mL
				1	0.1	0.00958 ug/mL
				-	N-ethyl perfluorooctane sulfonamidoacetic acid	0.01 ug/mL
				1	N-methyl perfluorooctane sulfonamidoacetic acid	0.01 ug/mL
				1		1 1
					Perfluorobutanesulfonic acid (PFBS)	0.00884 ug/mL
					Perfluorodecanoic acid	0.01 ug/mL
				1	Perfluorodecane Sulfonic acid	0.00964 ug/mL
					Perfluoroheptanoic acid (PFHpA)	0.01 ug/mL
					Perfluoroheptanesulfonic acid	0.00952 ug/mL
					Perfluorohexanesulfonic acid (PFHxS)	0.0091 ug/mL
					Perfluorononanoic acid (PFNA)	0.01 ug/mL
					Perfluorooctanoic acid (PFOA)	
					Perfluorooctanesulfonic acid (PFOS)	0.00928 ug/mL
					Perfluorooctane Sulfonamide	0.01 ug/mL
					Perrindropentanoic acid	- 1
					Perfluorofetradecanoic acid	0.01 10.01 mT/mT.
					Perfluorotridecanoic acid	
					Perfluoroundecanoic acid	
LCPFCSP_00148	05/17/18 Methanol, Lot 090285	10 mL LC	LC4:2FTS_00005 1	100 uL	Sodium 1H,1H,2H,2H-perfluorohexane	1
					sulfonate (4:2)	
		O 1	LC6:2FTS_00007 1	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane	0.474 ug/mL
		IC	LC8:2FTS_00007 1	100 uL		0.479 ug/mL

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			Reagent	raidiic	ן נ		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume	Reagent ID	Volume Added	Analyte	Concentration
				LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
				LCbr-NMeFOSAA_00001	100 uL	N-methyl perfluorc	0.5 ug/mL
				LCPFBA 00008	100 uL	-	0.5 ug/mL
		-		LCPFBS_00009	100 uL	Perfluorobutanesulfonic acid	0.442 ug/mL
				LCPFDA 00008	100 uL	1-	0.5 ug/mL
						Perfluorododecanoi	
				LCPFDS 00008		$\perp$	
				LCPFHpA_00011	100 uL	Perfluoroheptanoic acid	0.5 ug/mL
				LCPFHpsA_00003	100 uL	1	0.476 ug/mL
				LCPFHxA_00010	100 uL	Perfluorohexanoic acid	0.5 ug/mL
				LCPFHxS-br_00006	100 uL	Perfluorohexanesulfonic acid (PFHxS)	0.455 ug/mL
				LCPFNA_00010	100 uL	acid	1 1
					- 1	$\sim$	
				- 1		Perfluorononanesulfonic	- 1
				LCFFOA UUUII		Feriluorooctanoic acid (	
				LCPFOS-br_0000/	TO OOT	Periluorooctanesulionic acid (PFOS)	0.464 ug/mL
					100 uL	-	0.5 ug/mL
				LCPFPeA_00008			0.5 ug/mL
				LCPFPes 00003		$\rightarrow$	
					100 uL	$\rightarrow$	
						$\rightarrow$	ر ا
	()		1	- 1	100 uL	$\rightarrow$	٠. د ک
LC4:2FTS_00005	12/12/21	WEI	WELLINGTON, Lot 42FTS1216	(Purchased Reagent)	ent)	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	46.7 ug/mL
LC6:2FTS_00007	04/20/22	WEI	WELLINGTON, Lot 62FTS0417	(Purchased Reagent)	ent)		47.4 ug/mL
LOCOCO DE ELO.	7	TOTAL			1	sulfonate (6:2)	c
	17/71/71	H H H H H H H H H H H H H H H H H H H	WELLINGION, LOC 02F131210	(Fuichased Reagent)	enc)	sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	سار وم د./4
LCbr-NEtFOSAA_00001	01/17/23	WELLI	WELLINGTON, Lot brNEtFOSAA0118	(Purchased Reagent)	ent)	N-ethyl perfluorooctane sulfonamidoacetic acid	20 ng/mr
LCbr-NMeFOSAA_00001	01/17/23	WELLI	WELLINGTON, Lot brNMeFOSAA0118	(Purchased Reagent)	ent)	N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA_00008	05/29/22	Wellingto	Wellington Laboratories, Lot PFBA0517	(Purchased Reagent)	ent)	Perfluorobutyric acid	50 ug/mL
LCPFBS_00009	09/21/22	Wellington	n Laboratories, Lot LPFBS0917	(Purchased Reagent)	ent)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA 00008	05/29/22	Wellingto	Wellington Laboratories, Lot PFDA0517	(Purchased Reagent)	ent)	Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22	Wellington	Laboratories, Lot		ent)		
ICPFDS 00008	11/08/22	Wellington	Lot	(Purchased Reagent)	ent)	Perfluorodecane Sulfonic acid	
LCPFHpA_00011	09/27/22	Wellingto	Wellington Laboratories, Lot PFHpA0917	(Purchased Reagent)	ent)	Perfluoroheptanoic acid (PFHpA)	50 ug/mL

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				0 0 0 0 0	Parent Reagent	ıt		
	Ехр	Prep	Dilutant	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCPFHpSA_00003	09/01/22	Wellington	Wellington Laboratories, Lot LI	LPFHpS0817	(Purchased Reagent)	ent)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellington	Laboratories	Lot PFHxA0917	(Purchased Reagent)	ent)	Perfluorohexanoic acid	20 ng/mF
ICPFHxS-br_00006	01/04/22	Wellington I	Wellington Laboratories, Lot br	Lot brPFHxSK0117	(Purchased Reagent)	ent)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA 00010	07/20/22	Wellington	Wellington Laboratories, Lot I	PFNA0717	(Purchased Reagent)	ent)	Perfluorononanoic acid (PFNA)	50 ug/mL
I							Perfluorooctanoic acid (PFOA)	0.05 ug/mL
LCPFNS_00003	09/27/22	Wellington	Wellington Laboratories, Lot L	LPFNS0917		ent)	Perfluorononanesulfonic acid	48 ug/mL
LCPFOA_00011	09/27/22	Wellington	Wellington Laboratories, Lot I	PFOA0917	(Purchased Reagent	ent)	Perfluorooctanoic acid (PFOA)	50 ug/mL
ICPFOS-br_00007	01/12/22	Wellington	Wellington Laboratories, Lot brPFOSK0117	rPFOSK0117	(Purchased Reagent)	ent)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00013	09/01/22	Wellington	Laboratories, Lot	FOSA0817I	(Purchased Reagent	ent)	Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA_00008	06/14/22	Wellington	Wellington Laboratories, Lot P	Lot PFPeA0617	(Purchased Reagent)	ent)	Perfluoropentanoic acid	20 ng/mL
LCPFPes_00003	01/11/22	Wellington	Lot	LPFPeS0117	(Purchased Reagent)	ent)	Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA 00008	09/30/21	Wellington	Wellington Laboratories, Lot PI	PFTeDA0916	(Purchased Reagent)	ent)	Perfluorotetradecanoic acid	20 ng/mL
LCPFTrDA 00008	05/02/22	Wellington	Wellington Laboratories, Lot PFTrDA0517	FTrDA0517	(Purchased Reagent)	ent)	Perfluorotridecanoic acid	20 ng/mL
ICPFUda 00008	10/18/21	Wellington	Wellington Laboratories, Lot P	Lot PFUdA1016	(Purchased Reagent)	ent)	Perfluoroundecanoic acid	20 ng/mL
LCPFC_LL3_00004	08/20/18	$\vdash$	02/22/18 MeOH/H2O, Lot 090285	200 mL I	LCMPFC_ALL_SU_00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
l							d5-NEtFOSAA	
							M2-6:2FTS	
							M2-8:2FTS	
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C3-PFBS	2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
							13C2 PFDoA	2.5 ng/mL
								2.5 ng/mL
							1802 PFHxS	2.365 ng/mL
								2.5 ng/mL
								2.5 ng/mL
							13C4 PFOS	
							13C2 PFUnA	2.5 ng/mL
					LCPFCSP_00136	500 uL	Sodium	0.2335 ng/mL
							$\bigcirc$ 1	
							sulfonate (4:2)	- 1
							Sodium	0.237 ng/mL
							<pre>1H,1H,2H,ZH-Perriuorooctane sulfonate (6:2)</pre>	
							Sodium	0.2395 ng/mL
							<pre>1H,1H,2H,2H-periluorodecane sulfonate (8:2)</pre>	
							N-ethyl perfluorooctane	0.25 ng/mL
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EMP   Prep   Dilutant   Final   Reagent ID   Volume					0 0 0 0	Parent Reagent	٠		
08/20/18   02/20/18   Methanol, Lot Baker   200 mL   LCd3-NWeFOSAA_00006   200 us   LCd5-NRIFCOSA 00006   200 us   LCM5-EFFS 00006   200 us   LCM5-EFFS 00006   200 us   LCM5-EFFS 00008   200 us   LCM5-EFFS 00008   200 us   LCM5-EFFS 00008   200 us   LCM5-EFFS 00008   200 us   LCM5-EFFS 00012   200 us   LCM5-EFFS 00012   200 us   LCM5-EFFS 00013   200 us   LCM5-EFFS 0001		Exp Date	Prep Date	Dilutant Used	Final Volume		Volume Added	Analyte	Concentration
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeF0SAA_00006 200 uL LCd3-NEFP0SAA_00006 200 uL LCd3-NEFP0SAA_00006 200 uL LCd2-NEFP0SAA_00006 200 uL LCd2-REFTS 00006 200 uL LCd2-REFTS 00006 200 uL LCd2-REFTS 00006 200 uL LCA2-REFTS 00006 200 uL LCA3-REFTS 00013 200								N-methyl perfluorooctane	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd3-NMEFOSAA_00006 200 uL LCM2-6:ETS 00069 200 uL LCM2-6:ETS 00069 200 uL LCM2-6:ETS 00069 200 uL LCM2-6:ETS 00069 200 uL LCM2-EPADA 00013 200 uL LCM								sulfonamidoacetic acid	
08/20/18   02/20/18   Methanol, Lot Baker   200 mL LCd3-NMeFOSAA_00006   200 uL LCd5-NEFDSAA_00006   200 uL LCd5-NEFDSAA_00006   200 uL LCd5-NEFDSAA_00006   200 uL LCd5-NEFDSAA_0003   200 uL LCd5-NEFDSA_0003   200 uL LCd5								Perfluorobutyric acid	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFCSAA_00006 200 uL LCd3-NMeFCSAA_00006 200 uL LCM2-6:FFS 0006 200 uL LCM2-6:FFS 0006 200 uL LCM2-6:FFS 0006 200 uL LCM2-FFRAA_00013 200 uL LCM2-F								Perfluorobutanesulfonic acid (PFRS)	0.221 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NNeFCSAA_00006 200 uL LCM2-6:FFS 00006 200 uL LCM2-6:FFS 00006 200 uL LCM2-6:FFS 00006 200 uL LCM2-6:FFS 00008 200 uL LCM2-6:FFS 00008 200 uL LCM2-6:FFS 00008 200 uL LCM2-6:FFS 00008 200 uL LCM2-FFS 00013 200 uL LC								Perfluorodecanoic acid	0.25 ng/mL
08/20/18   02/20/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA_00006   200 uL   LCd5-NEFPOSAA_00006   200 uL   LCd2-NEFPOSAA_00006   200 uL   LCM2-EFSTS 00006   200 uL   LCM2-EFSTS 00008   200 uL   LCM2-EFSTA 00013   200 uL   LCM2-EFSTS 00013   200 u									0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL Lcd3-NWeFOSAA_00006 200 uL Lcd2-NETS 00006 200 uL Lcd2-SETFS 00008 200 uL Lcd2-SETFS 00013 200 uL Lcd2-SETS 00013 200 uL Lcd2-SETS 00013 200 uL Lcd2-SETS 00013 200 uL Lcd2-SET-SET 00013 200 uL Lcd2-SET-SET 00013 200 uL Lcd2-SET-SET 00013 200 uL Lcd2-SET-SET 00013 200 uL Lcd2-SET-SET-SET 00013 200 uL Lcd2-SET-SET-SET-SET-SET-SET-SET-SET-SET-SET								Perfluorodecane Sulfonic acid	0.241 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-WMeFOSAA_00006 200 uL LCM2-6:ETS 00006 200 uL LCM2-6:ETS 00006 200 uL LCM2-6:ETS 00006 200 uL LCM2-6:ETS 00006 200 uL LCM2-FEPPA, 0013 200 uL LCM2-FEPA, 0013 200 uL LCM2-F								Perfluoroheptanoic acid	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeF0SAA_00006 200 uL LCd5-NELFOSAA_00006 200 uL LCM2-6:FFFS 00008 200 uL LCM2-6:FFFS 00008 200 uL LCM2-6:FFFS 00008 200 uL LCM2-FFFAA 0012 200 uL LCM2-FFFAA 0012 200 uL LCM2-FFFAA 0012 200 uL LCM2-FFFAA 0012 200 uL LCM2-FFFAA 0013 200 uL LCM2-FFFAA 0013 200 uL LCMPFBA 0013 2								(PrhpA) Devflingshentanesilfonia acid	0 238 ng/mT
08/20/18 Dethanol, Lot Baker 200 mL LCd3-NWeFCSAA_00006 200 uL LCd5-NEFFCSAA_00006 200 uL LCd5-NEFFCSAA_00006 200 uL LCAZ-8:EFFES 00006 200 uL LCAZ-8:EFFEA 00012 200 uL LCAZ-8:EFFEA 00013 200 uL LCAMPEPRA 00012 200 uL LCAMPEPRA 00013 200 uL LCAMPEPRA 00013 200 uL LCAMPERA 00013 200 uL LCAMPE								اد	0.55 ng/mT
08/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCM2-6:FPTS 00006 200 uL LCM2-6:FPTS 00006 200 uL LCM2-FHXDA 00013 200 uL LCM2-FPTSA 00									TIII / BII C Z · O
08/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCM2-6:FPTS 00006 200 uL LCM2-6:FPTS 00006 200 uL LCM2-FFRAA_00013 200 uL LCM2-FFRAA_00								Perfluorohexanesultonic acid (PFHxS)	0.2275 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCAS-NEFFOSAA_00006 200 uL LCAZ-NEFFOSAA_00006 200 uL LCAZ-PEFFS 00008 200 uL LCAZ-PEFFS 00008 200 uL LCAZ-PEFFS 00008 200 uL LCAZ-PEFFS 00013 200 uL LCAZ-PEFSA 00012 200 uL LCAY-PEFFA 00012 200 uL LCAY-PEFFA 00013 200 uL								Perfluorononanoic acid (PFNA)	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL Lcd3-NMeFOSAA_00006 200 uL Lcd5-NEtFOSAA_00006 200 uL LcM2-6:FF3 0006 200 uL LcM2-FEHXDA 00013 200 uL LcM2-FFHXDA 00013 200 uL LcM2-FFHXDA 00013 200 uL LcM2-FFHXDA 00013 200 uL LcM2-FFHXDA 00013 200 uL LcM2-FFHZDA 00013 200 uL LcM2-FFZDA 00013 200 uL LcM2-FZDA 00013 200 uL LcM2								Perfluorononanesulfonic acid	0.24 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NEFFSA_0006 200 uL LCM2-8:2FTS 00006 200 uL LCM2-8:2FTS 00006 200 uL LCM2-8:2FTS 00008 200 uL LCM2-PFDA_0013 200 uL LCMP-PBA_0013 200 uL								Perfluorooctanoic acid (PFOA)	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NBtFpSAA_00006 200 uL LCd5-NBtFpSAA_00006 200 uL LCM2-8:2FFS 00006 200 uL LCM2-PFFTSD 00013 200 uL LCM2-PFFTSD 00013 200 uL LCM2-PFTSD 00013 200 uL LCM4PPHA_00012 200 uL LCM4PPHA_00013 200 uL LCMPFBA_00013								Perfluorooctanesulfonic acid	0.232 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NETFOSAA_00006 200 uL LCM5-RETFS 00006 200 uL LCM5-RETFS 00006 200 uL LCM5-RETFS 00006 200 uL LCM5-RETFS 00008 200 uL LCM2-RETFS 00008 200 uL LCM2-RETFS 00013 200 uL LCM3-RETFS 00013 200 uL LCM3-RETFS 00013 200 uL LCM3-RETFS 00016 200 uL LCM3-RETS 00016 200 uL LCM3-RETS 00016 200 uL LCM3-RETS 00013 200 uL LCM3-R								Perfluoroctane Sulfonamide	0.25 ng/mT,
08/20/18 Nethanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NEtFOSAA_00006 200 uL LCM2-6:FTS 00006 200 uL LCM2-6:FTS 00006 200 uL LCM2-FFREAD 00013 200 uL LCM2PEFREAD 00013 200 uL LCM2PEFREAD 00013 200 uL LCM2PEFREAD 00013 200 uL LCM2PEFREAD 00013 200 uL LCM2PERAD 00								Perfluoropentanoic acid	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NEtFOSAA_00006 200 uL LCd5-NEtFOSAA_00006 200 uL LCM2-E:FTS_00008 200 uL LCM2-EFT-EDA_00013 200 u									0.2345 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NEtFOSAA_00006 200 uL LCM2-8:ETS_0006 200 uL LCM2-8:ETS_0006 200 uL LCM2PEHX.DA_00013 200 uL LCM2PEHX.DA_00013 200 uL LCM5PEPEA_00013 200 uL LCM5PEPEA_00013 200 uL LCM5PEPEA_00013 200 uL LCM5PEPEA_00013 200 uL LCMFPEA_00013 20								Perfluorotetradecanoic acid	0.25 ng/mL
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCd5-NEtFOSAA_00006 200 uL LCM2-6:FTS_00006 200 uL LCM2-FRADA_00013 200 uL LCM2-FRADA_00013 200 uL LCM2-FRADA_00012 200 uL LCM2-FRADA_00012 200 uL LCM2-FRADA_00012 200 uL LCM5-FFBA_00012 200 uL LCM5-FFBA_00013 200 uL LCM5-FFBA_00013 200 uL LCMF-FBA_00013 200								Perfluorotridecanoic acid	
08/20/18 02/20/18 Methanol, Lot Baker 200 mL LCd3-NMeFOSAA_00006 200 uL LCM2-6:FTS 00006 200 uL LCM2-6:FTS 00006 200 uL LCM2-FFTS 00008 200 uL LCM2-FFTS 00012 200 uL LCM2-FFTS 00012 200 uL LCM2-FFTS 00013 200 uL LCM2-FTTS 00013 2								Perfluoroundecanoic acid	0.25 ng/mL
LCd5-NEtF0SAA 00006	ALL_SU_	08/20/18	02/20/18	Methanol, Lot 141039		LCd3-NMeFOSAA_	l	d3-NMeFOSAA	0.05 ug/mL
CM2-6:FTS 00006						LCd5-NEtFOSAA 00006		d5-NEtFOSAA	0.05 ug/mL
LCM2-8:2FTS 00008						LCM2-6:FTS 00006		M2-6:2FTS	0.0475 ug/mL
LCM2PFHXDA 00013						LCM2-8:2FTS 00008		M2-8:2FTS	0.0479 ug/mL
LCM2PFTGA 00008						LCM2PFHxDA_00013		13C2-PFHxDA	0.05 ug/mL
LCM2PFTeDA 00012						LCM2PFOA_00008		13C2-PFOA	0.05 ug/mL
CMA4PEHPA 00012						LCM2PFTeDA_00012		13C2-PFTeDA	0.05 ug/mL
LCMSPEPEA 00013						LCM4PFHPA_00012		13C4-PFHpA	0.05 ug/mL
LCM8FGSA 00016						LCM5PFPEA_00013	- 1	13C5-PFPeA	0.05 ug/mL
Compress 00013						LCM8FOSA 00016	- 1	13C8 FOSA	
CMPFES 00006 200 uL						LCMPFBA 00013	- 1	13C4 PFBA	0.05 ug/mL
CMPFDA 00018						LCMPFBS_00006		13C3-PFBS	0.0465 ug/mL
CCMPFEDOA 00013   200 uL						$^{\circ}$			0.05 ug/mL
CAMPEHXA 00019   200 uL									
CAMPENS 00013   200 uL								13C2 PFHxA	0.05 ug/mL
CAMPENA 00013   200 uL						LCMPFHxS_00013		1802 PFHxS	0.0473 ug/mL
CLCMPFOA 00017   200 uL						LCMPFNA_00013		13C5 PFNA	0.05 ug/mL
LCMPFOS 00025 200 uL								13C4 PFOA	0.05 ug/mL
CAMPFUGA 00014   200 uL   1/08/22   WELLINGTON, Lot d3NMeFOSAA0517   (Purchased Reagent)   11/08/22   WELLINGTON, Lot d5NEtFOSAA1117   (Purchased Reagent)						LCMPFOS 00025		13C4 PFOS	0.0478 ug/mL
05/19/22   WELLINGTON, Lot d3NMeFOSAA0517 (Purchased Reagent)   11/08/22   WELLINGTON, Lot d5NEtFOSAA1117 (Purchased Reagent)						LCMPFUda 00014		13C2 PFUnA	0.05 ug/mL
11/08/22   WELLINGTON, Lot d5NEtFOSAA1117 (Furchased Readent)	LCd3-NMeFOSAA_00006	19/2	WE		517		ent)	d3-NMeFOSAA	50 ug/mL
	LCd5-NEtFOSAA_00006	11/08/22	ME	WELLINGTON, Lot d5NEtFOSAA11	.17		ent)	d5-NEtFOSAA	50 ug/mL
Readent)	LCM2-6:FTS 00006	17/	Δ	WELLINGTON, Lot M262FTS021	7	(Purchased Reade	ent)	M2-6:2FTS	47.5 ug/mL

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0.1 ug/mL 0.1 ug/mL 0.0964 ug/mL 0.1 ug/mL ng/mL 0.0948 ug/mL ng/mL Concentration 0.0958 ug/mL 0.0884 ug/mL 50 ug/mL 50 ug/mI 46.5 ug/mI nd/mI 50 ug/mI 0.1 50 0.1 47.8 0.0952 0.091 acid Sulfonate (6:2)
Sodium
1H,2H,2H-perfluorodecane
sulfonate (8:2)
N-ethyl perfluoroctane Perfluoroheptanesulfonic acid Perfluorobutanesulfonic acid Perfluorohexanoic acid Perfluorohexanesulfonic acid Sodium 1H,1H,2H,2H-perfluorohexane Sodium 1H,1H,2H,2H-perfluorooctane Perfluorodecane Sulfonic Perfluoroheptanoic acid sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorodecanoic acid Perfluorododecanoic acid Perfluorobutyric acid Analyte sulfonate (4:2) 13C4-PFHPA 13C2 PFDOA 13C5-PFPe? M2-8:2FTS 13C4 PFBA PFDA PFNA 13C4 PFOA 13C4 PFOS (PFHpA) (PFBS) mL Volume Added (Purchased Reagent) (Purchased Reagent)
(Purchased Reagent)
(Purchased Reagent) (Purchased Reagent)
(Purchased Reagent)
(Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) (Purchased Reagent) Purchased Reagent Parent Reagent LCPFCSP\_00132 Reagent 10000 uL Reagent Volume Wellington Laboratories, Lot M4PFHpA0517 Lot M5PFPeA0717 Wellington Laboratories, Lot M8FOSA1017I Wellington Laboratories, Lot MPFBA0417 Wellington Laboratories, Lot M3PFBS0815 Lot M2PFTeDA111 Final Wellington Laboratories, Lot MPFDoA0517 MPFUdA1116 Wellington Laboratories, Lot MPFNA0916 Lot MPFOS1017 Wellington Laboratories, Lot MPFDA071 Lot MPFOA101 Lot MPFHxA10: Lot MPFHxS02: WELLINGTON, Lot M282FTS071 Wellington Laboratories, Lot 02/20/18 Methanol, Lot 090285 Wellington Laboratories, Dilutant Prep Date 10/11/22 04/12/22 05/24/22 05/03/22 07/20/22 07/13/22 05/23/22 Exp Date Reagent ID ..LCM2PFTeDA 00012 ..LCM4PFHPA 00012 00013 LCMPFDoA 00013 ..LCMPFBS\_00006 .LCMPFDA 00018 LCMPFOS 00025 .LCMPFNA 00013 CMPFUda 0001 ..LCM5PFPEA ..LCMPFHxS CMPFHXA ..LCMPFBA . LCMPFOA

ng/mI

ug/mL ng/mI ng/m<sub>L</sub>

ng/mI nd/mI nd/mI

ng/mL

0.0928

ng/mL

Perfluorooctanoic acid (PFOA) Perfluorooctanesulfonic acid Perfluorononanesulfonic acid

Perfluorooctane Sulfonamide

Perfluoropentanoic acid

ng/mL

0.096

(PFNA)

Perfluorononanoic acid

(PFHxS)

ng/mL

ng/mL

ng/mL

ng/mL

ng/mL

Tm/bn

0.1

Job No.: 320-39023-1 Lab Name: TestAmerica Sacramento

Lab Name: TestAmerica Sacramento

SDG No.:

				4 0 0	Parent Reagent			
	H CX	Dren	לון יח	T (C)		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCN-EtFOSAA_00004	09/30/21	WEJ	WELLINGTON, LOT NETFOSAA091	916	(Purchased Reagent)	t)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCN-MeFOSAA_00005	10/12/21	WEJ	WELLINGTON, Lot NMeFOSAA0916	916	(Purchased Reagent)	t)	N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA 00007	05/27/21	Welling	Wellington Laboratories, Lot Pi	PFBA0516	(Purchased Reagent	t)	Perfluorobutyric acid	50 ug/mL
LCPFBS_00008	03/15/21	Welling		Lot LPFBS0316	(Purchased Reagent)	(t)	Perfluorobutanesulfonic acid	44.2 ug/mL
LCPFDA 00008	05/29/22	Welling	Wellington Laboratories, Lot Pi	PFDA0517	(Purchased Reagent	t)	Perfluorodecanoic acid	50 ug/mL
LCPFDoA 00008	05/29/22	Welling	Ι	Lot PFDoA0517		t)	Perfluorododecanoic acid	
ICPFDSA 00002	05/24/21	Welling1		Lot LPFDS0516		t)	Perfluorodecane Sulfonic acid	
LCPFHpA_00008	12/02/21	Welling	l	Lot PFHpA1216		t)	Perfluoroheptanoic acid	50 ug/mL
T.CPEHDSA 00003	09/01/22	+pailleM	Wellington Laboratories Tot T.PI	T.O+ T.PFHDS0817	(Pirchased Readent)	+	(PFHpA) Perfluorohentanesulfonio acid	47 6 11cz/mT.
TODON ANTICONT	12/22/20	Weiling Melling		LOT DEHVA1215		(2)		50 11g/mT.
TOPPHYS COOL	07/03/20	MCITIFING MATCH	- 1 >	THYCKU615		()		45 5 mg/mT.
**************************************	0 1 / 0 0 / / 0		m raboracories, boc piri	010000011	(rurcijased neageii	( )		
LCPFNA 00009	07/20/22	Welling	Wellington Laboratories, Lot Pi	Lot PFNA0717	(Purchased Reagent	t)	Perfluorononanoic acid (PFNA)	20 ng/mL
LCPFNS 00003	09/27/22	Welling	Wellington Laboratories, Lot LP	Lot LPFNS0917	(Purchased Reagent)	t)	Perfluorononanesulfonic acid	48 ug/mL
LCPFOA_00009	09/27/22	Welling	Wellington Laboratories, Lot Pi	Lot PFOA0917	(Purchased Reagent)	t)	Perfluorooctanoic acid (PFOA)	20 ng/mL
LCPFOS-br_00004	10/14/20	Wellingto	Wellington Laboratories, Lot brPFOSK101	PEOSK1015	(Purchased Reagent)	t)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
T.CPFOSA 00010	09/30/21	Welling		Tiot FOSA0916T	(Purchased Readent)	(+	Perfluorooctane Sulfonamide	50 11g/mT.
TCPFPPA 0007	05/31/21	Welling	Wellington Laboratories. Lot PF	Tot PFPeA0516	(Purchased Readent)	+)	Perfluoropentanoic acid	
	01/11/22	Wellingt	1-	Lot LPFPeS0117	(Purchased Reagent)	t)	Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA 00006	12/09/20	Wellingt	Lot	PFTeDA1215		(t)		50 ug/mL
ICPFTrDA 00006	02/12/21	Wellingt		Lot PFTrDA0216		t)	Perfluorotridecanoic acid	
LCPFUdA 00007	10/18/21	Welling		Lot PFUdA1016		(t)	Perfluoroundecanoic acid	50 ug/mL
T.CDEC 1.1.3 00005	11/18/18	ı⊢	06/05/18   MeOH/H20 T.o+ 090285	200 mT.	T.CMPEC AT.T. SII 00075	10 mT.	A 3-NW-FORDS A	2 5 ncr/mT.
	01/01/11		MCON/ NZO, LOC OSOZGO				d5-NEtFOSAA	
							M2-6.2FTS	2.375 ng/mT.
							M2-8:2FTS	
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C3-PFBS	2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
						·		2.5 ng/mL
								2.5 ng/mL
								2.365 ng/mL
							- 1	2.5 ng/mL
								тш/bu c.2
								Z.39 ng/mL
	_	_		_	_	_	13CZ FFUNA	7.5 ng/mL

SDG No.:

Job No.: 320-39023-1 Lab Name: TestAmerica Sacramento

				() () () ()	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume	Analyte	Concentration
1					( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	, C		L
					LCPFCSP_00148	100 UL	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	U.2335 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.237 ng/mL
							Sodium 1H.1H.2H.2H-perfluorodecane	0.2395 ng/mL
							sulfonate (8:2)	- 1
							N-ethyl perfluorooctane sulfonamidoacetic acid	0.25 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	0.25 ng/mL
							Perfluorobutyric acid	0.25 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	0.221 ng/mL
							Perfluorodecanoic acid	0.25 ng/mL
							Perfluorodecane Sulfonic acid	
							Periluoroheptanoic acid (PFHpA)	0.25 ng/mL
							١	
							Perfluorohexanoic acid	0.25 ng/mL
							(PFHxS)	
							acid	0.25 ng/mL
							Perfluorooctanoic acid (PFOA)	0.25025 ng/mL
							Perfluorononanesulfonic acid	
							Perfluorooctanesulfonic acid	0.232 ng/mL
							(FFUS) Perfluorooctane Sulfonamide	0.25 ng/mL
							Perfluoropentanoic acid	0.25 ng/mL
							Perfluoropentanesulfonic acid	0.2345 ng/mL
							Perfluorotetradecanoic acid	
							Perfluorotridecanoic acid	0.25 ng/mL
.LCMPFC ALL SU 00075	12/05/18	06/05/18	1	200 mL	LCd3-NMeFOSAA 00008	200 uL	d3-NMeFOSAA	0.05 ug/mL
 			141039				2 4 7 7 T T T T T T T T T T T T T T T T T	
					TCM2-6:FTC 00008	200 uL	M3-K:2ETS	Jm/bn c0.00
					T.CM2-8:2FTS 00010	- 1	M2-8:2FTS	
					T,CM2PFH×DA 00016		13C2-PFH×DA	
					LCM2PFOA 00008		13C2-PFOA	
					LCM2PFTeDA 00014		13C2-PFTeDA	
					LCM4PFHPA_00014	200 uL	13C4-PFHpA	0.05 ug/mL
					LCM5PFPEA 00015		13C5-PFPeA	
					LCM8FOSA 00019	200 uL	13C8 FOSA	
					LCMPFBA 00013	Z00 uL	ul 1304 FFBA	0.05 ug/mL
	_	_	_	_			H - C - C - C - C - C - C - C - C - C -	

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

			£	Parent Reagent	٦t		
	; E	ا ا ا	Keagent rists	בר	(22)		
Reagent ID	bare Date	rrep Date	Used Volume	. Reagent ID	Added	Analyte	Concentration
				T.CMPFDA 00020	200 11T.	ない ひかり なんり なんり なんり なんり なんり なんり なんり かんり かんり かんり かんり かんり かんり かんり かんり かんり か	0 05 11cm/mT.
						1302	
				T.CMDFH > 00000		1 200	
				TOWNER OF TOWNER		1 5 6 6	
				LCMFHXS COOLS	Z00 uL	1 2 C L	
					- 1	1000	
				LCMPFOA 00019		13C4	- 1
				LCMPFOS 00027	200 uL	$\rightarrow$	0.0478 ug/mL
					200 uL	_	0.05 ug/mL
LCd3-NMeFOSAA_00008	11/08/22			(Purchased Reagent)	ent)	d3-NMeFOSAA	50 ug/mL
LCd5-NEtFOSAA 00008	11/08/22	WELI	WELLINGTON, Lot d5NEtFOSAA1117	(Purchased Reagent)	ent)	d5-NEtFOSAA	50 ug/mL
LCM2-6:FTS 00008	02/16/23	WE	WELLINGTON, Lot M262FTS0218	(Purchased Reagent)	ent)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00010	01/24/23		WELLINGTON, Lot M282FTS0118	ı	ent)	M2-8:2FTS	
LCM2PFHxDA 00016	07/13/22	-		7 (Purchased	ent)	13C2-PFHxDA	50 ug/mL
$\cdot$ . LCM2PFOA 0 $\overline{0}$ 008	02/12/21	+	Wellington Laboratories, Lot M2PFOA0216	(Purchased	ent)	13C2-PFOA	50 ug/mL
LCM2PFTeDA 00014	11/30/22	+		7 (Purchased	ent)	13C2-PFTeDA	
LCM4PFHPA 00014	05/03/22	+	Wellington Laboratories, Lot M4PFHpA051	(Purchased	ent)	13C4-PFHpA	
LCMSPFPEA 00015	07/20/22	Wellingto	Wellington Laboratories, Lot M5PFPeA071	(Purchased	ent)	13C5-PFPeA	
LCM8FOSA 00019	10/11/22	-		(Purchased	ent)	13C8 FOSA	50 ug/mL
LCMPFBA 00015	02/16/23		Wellington Laboratories, Lot MPFBA0218		ent)	13C4 PFBA	50 ug/mL
LCMPFBS 00008	02/15/23		Wellington Laboratories, Lot M3PFBS0218	(Purchased	ent)	13C3-PFBS	
LCMPFDA 00020	02/16/23		on Laboratories, Lot MPFDA0218	(Purchased	ent)	13C2 PFDA	
LCMPFDoA 00015	02/16/23		Wellington Laboratories, Lot MPFDoA0218	(Purchased	ent)	13C2 PFDoA	50 ug/mL
LCMPFHxA 00022	10/27/22		Wellington Laboratories, Lot MPFHxA1017	(Purchased	ent)	13C2 PFHxA	50 ug/mL
LCMPFHxS 00015	03/22/23		Wellington Laboratories, Lot MPFHxS0318	(Purchased	ent)	1802 PFHxS	47.3 ug/mL
LCMPFNA 00015	12/14/22		Wellington Laboratories, Lot MPFNA1217	(Purchased	ent)		50
LCMPFOA 00019	05/04/23		Wellington Laboratories, Lot MPFOA0418	(Purchased	ent)	13C4 PFOA	50 ug/mL
LCMPFOS 00027	02/15/23		Wellington Laboratories, Lot MPFOS0218	(Purchased	ent)		47.8 ug/mL
LCMPFUda 00017	11/22/21		Wellington Laboratories, Lot MPFUdA1116	(Purchased	ent)	13C2 PFUnA	50 ug/mL
T.CPECSP 00148		+	285	T.C4:2FTS 00005	100 11T.		
	O H		2	r ) 		Sourant 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
				LC6:2FTS_00007	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
				LC8:2FTS 00007	100 uL		0.479 ug/mL
				I		1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
				LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane	0.5 ug/mL
						sulfonamidoacetic acid	
				LCbr-NMeFOSAA_00001	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
				LCPFBA 00008	100 uL	Perfluorobutyric acid	0.5 ug/mL
				LCPFBS_00009		Perfluorobutanesulfonic acid	
						(PFBS)	
				LCPFDA_00008	100 uL	Perfluorodecanoic acid	0.5 ug/mL
				LCPFDOA_00008	100 uL	Perfluorododecanoic acid	0.5 ug/mL
				LCPFDS_00008			0.482 ug/mL
				LCPFHpA_00011	100 uL	Perfluoroheptanoic acid	0.5 ug/mL
	_	_	_	_	_		_

Lab Name: TestAmerica Sacramento

SDG No.:

				Parent	t Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume	1 Reagent	Volume ID Added	me ed Analyte	Concentration
				T.CPFHpsA 00003	100	III. Perfluorobentanesulfonic acid	0 476 mg/mT.
				LCPFHXA 00010		ul Perfluorohexanoic acid	0.5 ug/mL
				LCPFHxS-br_00006	1006 100	ul Perfluorohexanesulfonic acid	0.455 ug/mL
				LCPFNA 00010	100	uL	0.5 ug/mL
		-					
					100	uL   Perfluorononanesulfonic	0.48 ug/mL
				LCPFOA_00011	100	ηľ	0.5005 ug/mL
				LCPFOS-br_00007	100	ηŢ	0.464 ug/mL
				400 E	-	:	
						ı,	лш/gn с.0
				LCPFFeA 00008		ı ı	
				TOPETION 00003	100	un reiliuoropentamesullonic acid	Tm/mr
				TODETHOR		3 5	
				LCPFUdA 00008		ul Perfluoroundecanoic a	
LC4:2FTS 00005	12/12/21	- M	WELLINGTON, Lot 42FTS1216	(Purchased	sed Reagent)	_	
I						1H, 1H, 2H, 2H-perfluorohexane sulfonate (4:2)	
LC6:2FTS_00007	04/20/22	M	WELLINGTON, Lot 62FTS0417	(Purchased	sed Reagent)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00007	12/12/21	M	WELLINGTON, Lot 82FTS1216	(Purchased	sed Reagent)	Sodium 1H, 1H, 2H, 2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCbr-NEtFOSAA_00001	01/17/23	WELI	WELLINGTON, Lot brNEtFOSAA0118	(Purchased	sed Reagent)	N-ethyl perfluorooctane sulfonamidoacetic acid	20 ng/mL
LCbr-NMeFOSAA_00001	01/17/23	WELI	WELLINGTON, Lot brNMeFOSAA0118	(Purchased	sed Reagent)	N-methyl perfluorooctane sulfonamidoacetic acid	20 ng/mL
LCPFBA_00008	05/29/22	Wellington	ton Laboratories, Lot PFBA0517	(Purchased	sed Reagent)	Perfluorobutyric acid	50 ug/mL
LCPFBS_00009	09/21/22	Wellingt	Wellington Laboratories, Lot LPFBS0917	7 (Purchased		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA 00008	05/29/22	Wellington	ton Laboratories, Lot PFDA0517	(Purchased	sed Reagent)	Perfluorodecanoic acid	50 ug/mL
LCPFDoA 00008	05/29/22	Wellingt	Lot	7 (Purchased		Perfluorododecanoic acid	50 ug/mL
LCPFDS_00008	11/08/22	Wellingt	Lot	7 (Purchased		Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00011	09/27/22	Wellingt	Wellington Laboratories, Lot PFHpA091	7 (Purchased	sed Reagent)	Perfluoroheptanoic acid (PFHpA)	20 ng/mT
LCPFHpSA_00003	09/01/22	Wellingt	Wellington Laboratories, Lot LPFHpS081	7 (Purchased	sed Reagent)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellingt				Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00006	01/04/22	Wellingto	Wellington Laboratories, Lot brPFHxSK0117	17 (Purchased		Perfluorohexanesulfonic acid   (PFHxS)	45.5 ug/mL
LCPFNA_00010	07/20/22	Welling	Wellington Laboratories, Lot PFNA0717	(Purchased	sed Reagent)	acid	50 ug/mL
TOPENS ODDO	00/10/00	+אמיר רפועו	Wellington Ishorstories Int I.DENSO 01'	Cosedovid)	Reaction Cont.)	Perfluoropoctanoic acid (FFUA)	0.05 ug/mL
T.CPEOA 00011	09/27/22	Wettige Welling	Wellington Laboratories, Tot PFDA0917	(Pirchased			
LCPFOS-br_00007	01/12/22	Wellingto	1.4			fonic	
LCPFOSA_00013	09/01/22	Wellingt	Lot	I (Purchased	sed Reagent)	Perfluoroctane Sulfonamide	50 ug/mL
LCPFPeA_00008	06/14/22	Wellingt	Wellington Laboratories, Lot PFPeA0617	7 (Purchased	sed Reagent)	Perfluoropentanoic acid	20 ng/mT

Lab Name: TestAmerica Sacramento

SDG No.:

				() () () ()	Parent Reagent	ıt		
Reagent ID	Exp	Prep Date	Dilutant Used	Final Volume	Readent ID	Volume	Analvte	Concentration
- 1	00/11/10	MO : [ [ ]	+0+0	7 1 10000000	10	+ 4 4		1 m/ 2 m 3 m
	01/11/00	WCILLIIGCOII	1 1	F. C.	(Farchased Neag	ciic)	Terracopenicanesarronro acra	T=/=: 03
TOPFIEDA UUU8	09/30/21	Wellington	Lot	PFTeDA0916	(Furchased Reagent)	ent)	Periluorotetradecanoic acid	Tm/bn 05
LCFFTTFDA 00008	05/02/22	Wellington	LOT	PFTrdAusi/	(Furchased Reagent)	ent)		
LCPFUdA 00008	10/18/21	Wellingtor	Wellington Laboratories, Lot PF	PFUdA1016	(Purchased Reagent)	ent)	Perfluoroundecanoic acid	20 ng/mT
LCPFC LL4 00004	08/20/18	02/22/18 Me	02/22/18 MeOH/H2O, Lot 090285	200 mL I	LCMPFC ALL SU 00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
1							d5-NEtFOSAA	
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	
							13C2-PFHxDA	
							13C2-PFOA	
							13C2-PFTeDA	
							13C4-PFHpA	
							13C5-PFPeA	
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
								2.325 ng/mL
								2.5 ng/mL
							13C2 PFHxA	2.5 ng/mL
							1802 PFHxS	2.365 ng/mL
							13C5 PFNA	2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C2 DEIInA	
					T.CPECSP 00132	200 11T.		0.934 ng/mT.
				4			2H, 2H-	
							sulfonate $(4:2)$	
							Sodium	0.948 ng/mL
							1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	
							Sodium	0.958 ng/mL
							in, in, zn, zn-perriuorouecane sulfonate (8:2)	
							N-ethyl perfluorooctane	1 ng/mL
							N-methyl perfluorooctane	1 ng/mL
							Perfluorobuturic acid	1 ng/mI.
							Porfluorobutanesulfonio acid	- 1
							Perfluorodecanoic acid	1 ng/mL
							Perfluorododecanoic acid	1 ng/mL
							Perfluorodecane Sulfonic acid	0.964 ng/mL
							Perfluoroheptanoic acid (PFHbA)	1 ng/mL
							Perfluoroheptanesulfonic acid	0.952 ng/mL
							Perfluorohexanoic acid	1 ng/mL
							Perfluorohexanesulfonic acid	0.91 ng/mL
	_	_		_		_	(Fruxo)	_

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

					+ # # # # # # # # # # # # # # # # # # #	1		
			R	Reagent				
Reagent ID	Exp Date	Prep Date	Dilutant B	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Perfluorononanoic acid (PFNA)	1 ng/mL
							- Loui	
								- 1
							fonic	0.928 ng/mL
							Perfluorooctane Sulfonamide	1 ng/mL
							Perfluoropentanoic acid	1 ng/mL
							Perfluoropentanesulfonic acid	0.938 ng/mL
							Perfluorotetradecanoic acid	1 ng/mL
							Perfluorotridecanoic acid	1 ng/mL
							Perfluoroundecanoic acid	1 ng/mL
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker	200 mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	0.05 ug/mL
					LCd5-NEtFOSAA 00006	200 uL	d5-NEtFOSAA	0.05 ug/mL
					LCM2-6:FTS 00006	200 uL	M2-6:2FTS	0.0475 ug/mL
					LCM2-8:2FTS 00008	200 uL	M2-8:2FTS	0.0479 ug/mL
					LCM2PFHxDA 00013	200 uL	13C2-PFHxDA	0.05 ug/mL
					LCM2PFOA_00008	200 uL	13C2-PFOA	
					LCM2PFTeDA_00012	200 uL	13C2-PFTeDA	
					LCM4PFHPA_00012	200 uL	13C4-PFHpA	0.05 ug/mL
					LCM5PFPEA_00013	200 uL	13C5-PFPeA	0.05 ug/mL
						200 uL	13C8 FOSA	0.05 ug/mL
						- 1	13C4 PFBA	
					LCMPFBS_00006	200 uL		0.0465 ug/mL
					LCMPFDA_00018	200 uL	13C2 PFDA	0.05 ug/mL
					- 1	200 uL	13C2	0.05 ug/mL
					LCMPFHxS 00013			
								- 1
					LCMPFOA_00017	200 uL	13C4 PFOA	0.05 ug/mL
					LCMPFOS 00025	- 1	_	
	1					200 uL	_	
LCd3-NMeFOSAA 00006	05/19/22		WELLINGTON, Lot d3NMeFOSAA0517			ent)	d3-NMeFOSAA	- 1
LCd5-NEtFOSAA 00006			WELLINGTON, Lot d5NEtFOSAA1117			ent)	d5-NEtFOSAA	
LCM2-6:FTS 00006	02/11/22		WELLINGTON, Lot M262FTS0217		(Purchased Reagent	int)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00008	07/05/22	-	WELLINGTON, Lot M282FTS0717		- 1	ent)	M2-8:2FTS	
LCM2PFHxDA_00013	07/13/22		Wellington Laboratories, Lot M2PFHxDA071	DA0717	- 1	int)	13C2-PFHxDA	50 ug/mL
LCM2PFOA_00008	02/12/21		+	A0216	(Purchased Reagent)	int)	13C2-PFOA	
LCM2PFTeDA_00012	11/30/22	_	Wellington Laboratories, Lot M2PFTeDA11	DA1117	(Purchased Reagent)	ut)	13C2-PFTeDA	20 ng/mL
LCM4PFHPA 00012	05/03/22		Wellington Laboratories, Lot M4PFHpA051	A0517	(Purchased Reagent)	int)	13C4-PFHpA	50 ug/mL
LCMSPFPEA 00013	07/20/22		Wellington Laboratories, Lot M5PFPeA071	A0717	(Purchased Reagent	int)	13C5-PFPeA	50 ug/mL
LCM8FOSA 00016	10/11/22		Wellington Laboratories, Lot M8FOSA1017I	1017I	(Purchased Reagent)	int)	13C8 FOSA	50 ug/mL
LCMPFBA 00013	04/12/22		Wellington Laboratories, Lot MPFBA041	10417	(Purchased Reagent)	int)	13C4 PFBA	50 ug/mL
LCMPFBS 00006	05/24/22		Wellington Laboratories, Lot M3PFBS081	S0815	(Purchased Reagent)	int)	13C3-PFBS	46.5 ug/mL
LCMPFDA 00018	07/13/22		Wellington Laboratories, Lot MPFDA071	10717	(Purchased Reagent	int)	13C2 PFDA	50 ug/mL
LCMPFDOA 00013	05/23/22		ton Laboratories, Lot MPFDoA051	A0517	(Purchased Reagent)	int)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00019	10/27/22		Laboratories, Lot	A1017	1	int)	13C2 PFHxA	20 ng/mL
LCMPFHxS 00013	02/11/22		Wellington Laboratories, Lot MPFHxS021	S0217	(Purchased Reagent)	int)	1802 PFHxS	47.3 ug/mL
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Lab Name: TestAmerica Sacramento

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				0 0 0 0	Parent Reagent	ען		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final	Reagent ID	Volume Added	Analyte	Concentration
T.CMPENA 00013	09/30/21	Wellington	Taboratories Tot	MPFNA0916	(Pirchased Readent)	n+)	1305 PENA	50 11cf/mT.
. LCMPFOA 00017	10/17/22	Wellingt	Laboratories, Lot	MPFOA1017		int)		50 ug/mL
. LCMPFOS 00025	10/17/22	Wellingt	Lot	FOS1017	1	int)		
LCMPFUdA 00014	11/22/21	Wellingto	Wellington Laboratories, Lot MPF	UdA1116		int)		50 ug/mL
. LCPFCSP 00132	08/20/18	02/20/18 N		1285   10000 uL		200 uL	Sodium	0.934 ug/mL
I					I		1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
				1	LC6:2FTS 00003	200 uL	Sodium	0.948 ug/mL
					I		1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	
				1	LC8:2FTS_00003	200 uL	Sodium	0.958 ug/mL
							1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
				<u>                                     </u>	LCN-EtFOSAA_00004	200 uL	N-ethyl perfluorooctane	l ug/mL
				1	LCN-MeFOSAA_00005	200 uL	N-methyl perfluorooctane	1 ug/mL
				<u>I'</u>	TOPERS OUT	Tri UUC	Derfluorobuturia	1 11cz /mT.
					LCPFBS_00008		reitinorobutanesulfonic acid	0.884 ug/mL
				1	LCPFDA 00008	200 uL	Perfluorodecanoic acid	1 ug/mL
				ı'	T.CPFDOM 00008		Perfluorododecanoic acid	
							Perfluorodecane Sulfonic acid	
				<u>                                     </u>	LCPFHpA_00008	200 uL	Perfluoroheptanoic acid	1 ug/mL
					T.CPEHDSA 00003	200 11T.	Perf lloroheptanesulfonic acid	0.952 mg/mT.
					LCPFHXA 00007	- 1		
							Perfluorohexanesulfonic acid	0.91 ug/mL
				1	LCPFNA 00009	200 uL	Perfluorononanoic acid (PFNA)	1 ug/mL
				1	LCPFNS 00003		fonic.	
					LCPFOA_00009	200 uL	Perfluorooctanoic acid (PFOA)	
					LCPFOS-br_00004	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
				<u>                                     </u>	LCPFOSA_00010	200 uL	Perfluorooctane Sulfonamide	
					LCPFPeA_00007	200 uL	Perfluoropentanoic acid	1 ug/mL
				[	LCPFPes 00003	200 uL	Perfluoropentanesulfonic acid	0.938 ug/mL
					LCPFTeDA 00006		Perfluorotetradecanoic acid	l ug/mL
				<u>.,1,</u>			Periluorotridecanoic acid	l ug/mL
10100 SH4C. NOT	10/10/01	IM	METITNCHON TOTAL		LCFFUCA UNUU/	Z00 UL	Sodium	-1 [-
	12/12/21	M	LOC 42FISIZI			:::L)	soulum 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	40. / ug/mL
LC6:2FTS_00003	06/25/21	WE	WELLINGTON, Lot 62FTS0616		(Purchased Reagent)	int)	O.I	47.4 ug/mL
T.C.8.2 00003	08/22/21	IM.	WEIT.TANGTON TOT 808TS		(Pirchased Readent)	n+)	Sulfonate (6:2)	47 9 11ct/mT.
000000000000000000000000000000000000000	000	Š	1 7 0		וימו (וימוס מיים מיים מיים מיים מיים מיים מיים מיי	(1110)	1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
	1			-				

Lab Name: TestAmerica Sacramento

SDG No.:

				+ 2 0 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID 7	Volume Added	Analyte	Concentration
LCN-EtFOSAA_00004	09/30/21	WE	WELLINGTON, LOT NETFOSAA091	10	(Purchased Reagent)		N-ethyl perfluorooctane	20 ng/mL
	()			,			sulfonamidoacetic acid	i C
LCN-MeFOSAA_00005	10/12/21	WE	WELLINGTON, LOT NMCFOSAAU916	9	(Purchased Reagent)		N-methyl periluorooctane sulfonamidoacetic acid	Jm/bn 0s
LCPFBA_00007	05/27/21	Wellin	Wellington Laboratories, Lot PF	PFBA0516	(Purchased Reagent)		Perfluorobutyric acid	20 ng/mL
LCPFBS_00008	03/15/21	Welling	Wellington Laboratories, Lot LP1	Lot LPFBS0316	(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA 00008	05/29/22	Wellington	Laboratories, Lot	PFDA0517	(Purchased Reagent		Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22	Welling	Wellington Laboratories, Lot PFDoA051	DoA0517	(Purchased Reagent)		Perfluorododecanoic acid	50 ug/mL
LCPFDSA 00002	05/24/21	Welling	Wellington Laboratories, Lot LPI	Lot LPFDS0516	(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00008	12/02/21	Welling	Wellington Laboratories, Lot PF	Lot PFHpA1216	(Purchased Reagent)		Perfluoroheptanoic acid	1m/bn 05
LCPFHpSA 00003	09/01/22	Welling	Wellington Laboratories, Lot LPFHpS0817	THpS0817	(Purchased Reagent)		Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA 00007	12/22/20	Welling		Lot PFHxA1215	(Purchased Reagent)			50 ug/mL
LCPFHxS-br_00004	07/03/20	Wellingt	Wellington Laboratories, Lot brPF	t brPFHxSK0615	(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA 00009	07/20/22	Wellin	Wellington Laboratories, Lot PF	Lot PFNA0717	(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS 00003	09/27/22	Welling	1	Lot LPFNS0917			Lfonic	48 ug/mL
LCPFOA 00009	09/27/22	Wellin	Wellington Laboratories, Lot PF	Lot PFOA0917			Perfluorooctanoic acid (PFOA)	50 ug/mL
LCPFOS-br_00004	10/14/20	Wellingt	Wellington Laboratories, Lot brPFOSK1015	FOSK1015	(Purchased Reagent)		Perfluorooctanesulfonic acid	46.4 ug/mL
T C D E O S S S S S S S S S S S S S S S S S S	09/30/21	Molling	Mellington Tehovetovice Tot EO	TO+ FOSA0016T	(+noneod besedown)		Dorfluoroctano Sulfonamide	Tm/ ∞1: 0∃
10000 KORROT	05/30/21	WELLLII	11⁻	25071G			Dorfluoromontanoi a acid	
TOBERS 0000/	03/31/21	WELLIII Sa' ' [ [ M	<b>-</b> ' ⊦	OL FEFENOJIO	(Fulcilased Reagelic,		Porfluoropentanoic acia	JM /gn ug/mI
	10/00/00/00	WELLIIG FILIC	- 1	F C 2 C L 7			Ferranciopentamesantonic acta	Till / Bn 6.0 %
LCFFTeDA 00006	ν, υ	Welling	Laboratories,	Lot PFTFEDAIZIS	- 1		Periluorotetradecanoic acid	
LCPFTrDA 00006	02/12/21	Wellington	Laboratories,	Lot PFTrDAU216			Pertluorotridecanoic acid	20 ug/mL
LCPFUdA 00007	10/18/21	Welling	Wellington Laboratories, Lot PF	ot PFUdA1016	(Purchased Reagent)		Perfluoroundecanoic acid	20 ng/mL
LCPFC LL4 00005	11/18/18	06/05/18	06/05/18 MeOH/H2O, Lot 090285	200 mL	LCMPFC ALL SU 00075	10 mL	d3-NMeFOSAA	2.5 ng/mL
1					   		d5-NEtFOSAA	2.5 ng/mL
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
								2.325 ng/mL
								Z.5 ng/mL
								2.5 ng/mL
								2.5 ng/mL
								2.365 ng/mL
								2.5 ng/mL
								2.5 ng/mL
							- 1	2.39 ng/mL
	_		_	_	_		13C2 PFUnA	2.5 ng/mL

Lab Name: TestAmerica Sacramento

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				1	Parent Reagent	ш		
	EX EX	Prep	Dilutant	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
					LCPFCSP_00148	400 uL	Sodium 1H, 1H, 2H, 2H-perfluorohexane sulfonate (4:2)	0.934 ng/mL
							Sodium 1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2)	0.948 ng/mL
							Sodium 1H,1H,2H,2H-perfluorodecane	0.958 ng/mL
							sulfonate (8:2)	- 1
							N-ethyl perfluorooctane sulfonamidoacetic acid	l ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	1 ng/mL
							Perfluorobutyric acid	1 1
							Perfluorobutanesulfonic acid (PFBS)	0.884 ng/mL
							Perfluorodecanoic acid	1 ng/mL
							Perfluorododecanoic acid	1 ng/mL
								7 7
							(PFHpA)	
							Perfluoroheptanesulfonic acid	0.952 ng/mL
							- 1	П,
							Perfluorohexanesulfonic acid (PFHxS)	0.91 ng/mL
							rononanoic acid	1 ng/mL
								1.001 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	0.928 ng/mL
							Perfluorooctane Sulfonamide	1 ng/mL
							Perilloropentanesulionic acid	0.938 ng/mL
							Perfluorotridecanoic acid	1 ng/mL
							Perfluoroundecanoic acid	
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18	Methanol, Lot Baker 141039	200 mL	LCd3-NMeFOSAA_00008	200 uL	d3-NMeFOSAA	0.05 ug/mL
					LCd5-NEtFOSAA 00008		d5-NEtFOSAA	
					LCM2-6:FTS 00008	200 uL	M2-6:2FTS	0.0475 ug/mL
					ICM2-8:2FTS 00010	200 uL	M2-8:2FTS	0.0479 ug/mL
					TCM2 PEDA 00008		1302 FEIGHT	
					LCM2PFTeDA 00014		13C2-PFTeDA	
					LCM4PFHPA 00014	200 uL	13C4-PFHpA	0.05 ug/mL
					LCMSPFPEA 00015	1 1	13C5-PFPeA	
					LCM8FOSA 00019		13C8 FOSA	0.05 ug/mL
					TCMPEPS 00008	200 uL	13C4 PFBA	0.05 ug/mL
_	_		_	_		2000		TIII / Sp

Lab Name: TestAmerica Sacramento

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	Concentration	0.05 ug/mL	0.05 ug/mL						0.0478 ug/mL	0.05 ug/mL	20 ng/mL	50 ug/mL	47.5 ug/mL		50 ug/mL	50 ug/mL		50 ug/mL		50 ug/mL	50 ug/mL	46.5 ug/mL			50 ug/mL	47.3 ug/mL		50 ug/mL	47.8 ug/mL	50 ug/mL			0 474 11cm/mT.	0 479 ind/mT	7 m/ mT.		0.5 ug/mL			0.442 ug/mL	F			•	Tm/bn c.0
	Analyte	13C2 PFDA	13C2	1 2001	1000	1 2 C L	T 0 0	13C4	13C4	13C2 PFUnA	d3-NMeFOSAA	d5-NEtFOSAA	M2-6:2FTS	M2-8:2FTS	13C2-PFHxDA	13C2-PFOA	13C2-PFTeDA	13C4-PFHpA	13C5-PFPeA	13C8 FOSA	13C4 PFBA	13C3-PFBS	13C2 PFDA	13C2 PFDoA	13C2 PFHxA	1802 PFHxS		13C4 PFOA	13C4 PFOS	13C2 PFUnA	Sodiu		Sullonate (4:2)	SOLI LOID CA	+		N-methyl perfluorc	$\rightarrow$	Perfluorobutyric acid		(FFBS)	_	Porfluorodogano Sulfonia	+	Pertluoroneptanoic acid
<b>ц</b>	Volume Added	200 uL			2000	- 1			200 uL	200 uL	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	ent)	100 uL		Tri UUT	100 t	100 Tri		100 uL		- 1	100 uL	;				100 uL
Parent Reagent	Reagent ID	LCMPFDA 00020		TOMBEH N DOOS	TOWNER OF THE PROPERTY OF THE	LCMPFHXS 00013	LCMFFNA OUOIS		LCMPFOS_00027	LCMPFUdA_00017	(Purchased Reagent)	(Purchased Reagent)	(Purchased Reagent)		(Purchased Reagent)	(Purchased Reagent)				(Purchased Reagent)	(Purchased Reagent)	1			(Purchased Reagent	(Purchased Reagent)				(Purchased Reagent)		1	1.06.2FTS 00007	T.C.8.2FTS 00007	T.Chr-ME+FOSAA 00001	TOO BUT THE CE COOL	LCbr-NMeFOSAA_00001	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LCPFBA_00008	LCPFBS_00009	00000		10	10 mm 000000	LCPFHPA_00011
Reagent	Final Volume		-								117	117	8.	8.	M2PFHxDA0717	FOA0216	M2PFTeDA1117	M4PFHpA0517	M5PFPeA0717	M8FOSA1017I	FBA0218	Lot M3PFBS0218	Lot MPFDA0218	MPFDoA0218	MPFHxA1017	MPFHxS0318	FNA1217	Lot MPFOA0418	FOS0218	MPFUdA1116	10 mL		-												
	Dilutant Used											WELLINGTON, Lot d5NEtFOSAA111		WELLINGTON, Lot M282FTS0118	Wellington Laboratories, Lot M2PF	Wellington Laboratories, Lot M2PFOA0216	Wellington Laboratories, Lot M2PF	Lot		Wellington Laboratories, Lot M8F	Wellington Laboratories, Lot MPFBA0218	Wellington Laboratories, Lot M3F	Wellington Laboratories, Lot MP	Lot	on Laboratories, Lot MPF	Lot		Wellington Laboratories, Lot MP	Wellington Laboratories, Lot MPFOS0218	Wellington Laboratories, Lot MPF	285														
	Prep Date										WELL	WELL	MEI	WEI	Wellingtor	Wellingto	Wellingtor	Wellingto	Wellingto	Wellingto	Wellingt	Wellingto	Wellingt	Wellingto	Wellington	Wellingto	Wellingt	Wellingt	Wellingt	Wellingto	05/17/18 N														
	Exp Date										11/08/22	11/08/22	02/16/23	01/24/23	07/13/22	02/12/21	-	05/03/22	07/20/22	10/11/22	02/16/23	02/15/23	02/16/23	02/16/23	10/27/22	03/22/23	12/14/22	05/04/23	02/15/23	11/22/21	+														
	Reagent ID										LCd3-NMeFOSAA 00008	LCd5-NEtFOSAA 00008	LCM2-6:FTS 00008	LCM2-8:2FTS 00010	LCM2PFHxDA 00016	LCM2PFOA 00008	LCM2PFTeDA 00014	LCM4PFHPA 00014	LCM5PFPEA 00015	LCM8FOSA 00019	LCMPFBA 00015	LCMPFBS 00008	LCMPFDA 00020	LCMPFDoA 00015	LCMPFHxA 00022	LCMPFHxS 00015	LCMPFNA 00015	LCMPFOA 00019	LCMPFOS 00027	LCMPFUda 00017	.LCPFCSP 00148														

Lab Name: TestAmerica Sacramento

SDG No.:

				Farent Reagent	- 1		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume	Reagent ID	Volume Added	Analyte	Concentration
				LCPFHpSA 00003	100 uL	Perfluoroheptanesulfonic acid	0.476 ug/mL
				LCPFHxA 00010	100 uL		0.5 ug/mL
				LCPFHxS-br_00006	100 uL	Perfluorohexanesulfonic acid (PFHxS)	1
				LCPFNA 00010	100 uL	Perfluorononanoic acid (PFNA)	0.5 ug/mL
				I		Perfluorooctanoic acid (PFOA)	
				LCPFNS_00003	100 uL	Perfluorononanesulfonic acid	0.48 ug/mL
				LCPFOA_00011	100 uL	Perfluorooctanoic acid (PFOA)	0.5005 ug/mL
				LCPFOS-br_00007	100 uL	Perfluorooctanesulfonic acid	0.464 ug/mL
						(PFOS)	
				LCPFOSA_00013	100 uL	Perfluorooctane Sulfonamide	0.5 ug/mL
				LCPFPeA_00008	100 uL	Perfluoropentanoic acid	0.5 ug/mL
				LCPFPes_00003	100 uL	Perfluoropentanesulfonic acid	0.469 ug/mL
					100 uL	Perfluorotetradecanoic acid	0.5 ug/mL
				LCPFTrDA_00008	100 uL	Perfluorotridecanoic acid	
					100 uL	Perfluoroundecanoic acid	0.5 ug/mL
LC4:2FTS_00005	12/12/21		WELLINGTON, Lot 42FTS1216	(Purchased Reagent)	nt)	Sodium 1H,1H,2H,2H-perfluorohexane	46.7 ug/mL
						sulfonate (4:2)	
LC6:2FTS_00007	04/20/22		WELLINGTON, Lot 62FTS0417	(Purchased Reagent)	nt)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00007	12/12/21		WELLINGTON, Lot 82FTS1216	(Purchased Reagent)	nt)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCbr-NEtFOSAA_00001	01/17/23	WEJ	WELLINGTON, Lot brNEtFOSAA0118	(Purchased Reagent)	nt)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCbr-NMeFOSAA_00001	01/17/23	WEJ	WELLINGTON, Lot brNMeFOSAA0118	(Purchased Reagent)	nt)	N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA_00008	05/29/22	Wellin	Wellington Laboratories, Lot PFBA0517	(Purchased Reagent)	nt)	Perfluorobutyric acid	20 ng/mL
LCPFBS_00009	09/21/22	Welling	Wellington Laboratories, Lot LPFBS0917	(Purchased Reagent)	nt)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	05/29/22	Wellin	Wellington Laboratories, Lot PFDA0517	(Purchased Reagent)	nt)	Perfluorodecanoic acid	20 ng/mL
LCPFDoA_00008	05/29/22	Welling	Lot		nt)	Perfluorododecanoic acid	
LCPFDS_00008	11/08/22	Welling	Lot	(Purchased Reagent)	nt)	Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00011	09/27/22	Welling	Wellington Laboratories, Lot PFHpA0917	(Purchased Reagent)	nt)	Perfluoroheptanoic acid (PFHpA)	20 ng/mT
LCPFHpSA_00003	09/01/22	Wellington	Laboratories, Lot	(Purchased Reagent)	nt)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Welling	Wellington Laboratories, Lot PFHxA0917	(Purchased Reagent)	nt)	Perfluorohexanoic acid	7m/mr
LCPFHxS-br_00006	01/04/22	Wellingt	Wellington Laboratories, Lot brPFHxSK0117	7 (Purchased Reagent)	nt)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA_00010	07/20/22	Wellin	Wellington Laboratories, Lot PFNA0717	(Purchased Reagent)	nt)		20 ng/mL
COOO SEEDING A	11					Perfluorooctanoic acid (PFOA)	
LCPFNS 00003	09/27/22	Welling		(Purchased Reagent)	nt)	fonic	
LCPFOA 00011	09/27/22	Wellin	Wellington Laboratories, Lot PFOA0917	(Purchased	nt)		
LCPFOS-br_00007	01/12/22	Welling	Wellington Laboratories, Lot brPFOSK0117		nt)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00013	09/01/22	Welling	Wellington Laboratories, Lot FOSA0817I	(Purchased Reagent)	nt)	Perfluorooctane Sulfonamide	20 ng/mL
LCPFPeA_00008	06/14/22	Welling	Wellington Laboratories, Lot PFPeA0617	(Purchased Reagent)	nt)	Perfluoropentanoic acid	20 ng/mr

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Exp Date Date Used Used O1/11/22 Wellington Laboratories, Lot 09/30/21 Wellington Laboratories, Lot 05/02/22 Wellington Laboratories, Lot 10/18/21 Wellington Laboratories, Lot 08/20/18 02/22/18 MeOH/H2O, Lot 090285		Final Volume		Volume		
000	1 1 1 1.511		Reagent ID	Added	Analyte	Concentration
000	1 1 1	LPFPeS0117	(Purchased Reagent)	ent)	Perfluoropentanesulfonic acid	46.9 ug/mL
0	1	PFTeDA0916		ent)	Perfluorotetradecanoic acid	50 ug/mL
0	oratories, Lot PFU	PFTrDA0517	(Purchased Reagent)	ent)	Perfluorotridecanoic acid	50 ug/mL
		JdA1016	(Purchased Reagent)	ent)	Perfluoroundecanoic acid	50 ug/mL
	20, Lot 090285	200 mL LC	LCMPFC ALL SU 00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
					d5-NEtFOSAA	
					M2-6:2FTS	
					M2-8:2FTS	2.395 ng/mL
					13C2-PFHxDA	2.5 ng/mL
					13C2-PFOA	2.5 ng/mL
					13C2-PFTeDA	2.5 ng/mL
					13C4-PFHpA	2.5 ng/mL
					13C5-PFPeA	
					13C4 PFBA	2.5 ng/mL
						2.325 ng/mL
					13C2 PFDA	2.5 ng/mL
					13C2 PFDoA	2.5 ng/mL
					13C2 PFHxA	2.5 ng/mL
					1802 PFHxS	
					13C5 PFNA	
					13C4 PFOA	
						2.39 ng/mL
		l l	LCPFCSP 00132	500 uL	Sodiu	
			I		2H-	1
					sulfonate (4:2)	
					Sodium	2.37 ng/mL
					<pre>1H, 1H, 2H, 2H-perfluorooctane sulfonate (6:2)</pre>	
					Sodium 1H 1H 2H 2H-nerf]orodecane	2.395 ng/mL
					sulfonate (8:2)	
					N-ethyl perfluorooctane sulfonamidoacetic acid	2.5 ng/mL
					N-methyl perfluorooctane	2.5 ng/mL
					sulfonamidoacetic acid	
						- 1
					Perfluorobutanesulfonic acid (PFBS)	2.21 ng/mL
					Perfluorodecanoic acid	2.5 ng/mL
					Perfluorodecane Sulfonic acid	2.41 ng/mL
					Perfluoroheptanoic acid	
					Perfluoroheptanesulfonic acid	2.38 ng/mL
						2.5 ng/mL
					Perfluorohexanesulfonic acid	2.275 ng/mL

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

Part					-				
Exp   Exp   Date   Da				Reage	ent	Parent Reagen			
PREFINCE CONTINUES CONTI		Exp Date	Prep Date		lal ime		Volume Added	Analyte	Concentration
The control of the	n				+	1		7	F
10   10   10   10   10   10   10   10									Z.5 ng/mL
Perfilosorocentroide acid (1904)   Perfilosorocentroide acid (1904)   Perfilosorocentroide acid (1904)   2.3									7.4 ng/mL
Part								acid	
Part									
0.0   0.0								Dorfluorocatano Sulfonamido	
Continue								בייייייייייייייייייייייייייייייייייייי	
041   06/20/38   Methanol, Lot Baker   200 mL Lod3-MeePOSA_00006   200 LI BETILOCTOTTATAGENING acid   2.1 35     14/10/39   14/10								acıa	
08/20/18   02/20/18   Methanol, Lot Baker   200 ml Lod3-NWeFOSAA_00006   200 ul d3-NWeFOSAA_00006   20 ul d3-NWeFOSAA_0006   20 ul d3-NWEFOSAA_006   20 u								Perfluoropentanesulfonic acid	
08/20/18   OF/20/18   Methanol, Lot Baker   200 mL Loda-WherOSAA_00006   200 uL da-NuerOSAA_0000   0.05								Perfluorotetradecanoic acid	2.5 ng/mL
08/20/18   02/20/18   Dethanol, Lot Baker   200 mL Lod3-NNeFOSAA, 00006   200 mL D3-FREEDSAA   0.05								Perfluorotridecanoic acid	2.5 ng/mL
08/20/18   08/20/18   Methanol, Lot Baker   200 mL Jack-Werposh, 00006   200 LL Jack-Werposh   0.05								Perfluoroundecanoic acid	
LOGS-NEE-FOORAR 200 to Id-NEE-FOORAR 200 to Id-NE		08/20/18	02/20/18	Lot Baker	mL	cd3-NMeFosaa_00006			
T.CM2PERSTERN ONOGE   COU LIME - EFFECK ON LIME - EFFEC			1		ij	Cd5-NEtFOSAA 00006		_	
TAMES   TAME					ŭ	CM2-6:FTS 00006		-	1
Transpersor					ŭ	CM2-8:2FTS 00008		-	1
					ĭ	CM2PFHxDA 00013	1	-	
					ĭ	CM2PFOA 00008		-	
TOWERPERA 00012   200 uL 13G2-FPRA   0.05					ĭ	CM2PFTeDA 00012	1	_	
					ĭ	CM4PFHPA 00012		-	
ICMBFDA 0016   200 uL 13C8 FPBA   0.05					ĭ	CMSPFPEA 00013		-	
					ĭ	CM8FOSA_00016		-	
TOWNERS ONOGE   COULD   13C3_PEPS   0.006					ĭ		l		
ICMPEDA 00018   200 uL 1362 PEDA 0.005   10.					ĭ			-	
					ĭ	CMPFDA 00018		13C2	
LCMPENA 00019   200 uL 1302 PFNA   0.00473   0.00473   0.00473   0.00473   0.00473   0.00473   0.00473   0.00473   0.00473   0.005 PFNA   0.005   0.					ĭ	CMPFDOA_00013		13C2	
LOWING					ĭ	CMPFHxA_00019		13C2	
ICMPEND 00013   200 uL 13C5 PFNA   0.050					ĭ	CMPFHxS 00013		1802	
Company   Comp					ĭ			13C5	
					ĭ	CMPFOA_00017		13C4	
					ĭ	CMPFOS_00025		13C4	
0006         05/19/22         WELLINGTON, Lot d3NMeFCSAA0517         (Purchased Reagent)         d3-NMeFCSAA         50           0006         11/08/22         WELLINGTON, Lot d5NEtFCSAA1117         (Purchased Reagent)         d5-NEFCSAA         50           08         02/17/22         WELLINGTON, Lot M22FTS0217         (Purchased Reagent)         M2-8:2FTS         47.5           08         07/13/22         Wellington Laboratories, Lot M2PFHXDA0717         (Purchased Reagent)         13C2-PFHXDA         50           2         02/12/21         Wellington Laboratories, Lot M2PFPA0717         (Purchased Reagent)         13C2-PFHXDA         50           2         02/12/21         Wellington Laboratories, Lot M4PFPA0517         (Purchased Reagent)         13C2-PFPAA         50           2         01/20/22         Wellington Laboratories, Lot M5PFPA0517         (Purchased Reagent)         13C3-PFPAA         50           04/12/22         Wellington Laboratories, Lot M8PFBA0417         (Purchased Reagent)         13C3-PFPA         46.5           05/24/22         Wellington Laboratories, Lot M8PFBA0417         (Purchased Reagent)         13C3-PFDA         65           05/23/22         Wellington Laboratories, Lot M8PFBA0417         (Purchased Reagent)         13C3-PFDA         66           05/24/22         Wellington L					IC	CMPFUda_00014			
11/08/22   WELLINGTON, Lot dSNELFOSAA1117   (Purchased Ragent)   d5-NEFFOSAA   47.5	3-NMeFOSAA 00006	05/19/22	WELL	Lot d3NMeF(			ent)	d3-NMeFOSAA	
6         02/17/22         WELLINGTON, Lot M262FTS0217         (Purchased Reagent)         M2-6:2FTS         47.5           08         07/05/22         WELLINGTON, Lot M28EFTS0717         (Purchased Reagent)         13C2-PFHxDA         47.9           07/13/22         Wellington Laboratories, Lot M2PFTADA117         (Purchased Reagent)         13C2-PFPAA         50           11/30/22         Wellington Laboratories, Lot M2PFTADA117         (Purchased Reagent)         13C2-PFPAA         50           07/20/22         Wellington Laboratories, Lot M3FPRA0717         (Purchased Reagent)         13C3-PFPAA         50           10/11/22         Wellington Laboratories, Lot M8FOSA1017         (Purchased Reagent)         13C4-PFBA         50           04/12/22         Wellington Laboratories, Lot M8FDA017         (Purchased Reagent)         13C4 PFBA         50           04/12/22         Wellington Laboratories, Lot M8FDA017         (Purchased Reagent)         13C2 PFBA         50           05/24/22         Wellington Laboratories, Lot M8FDA017         (Purchased Reagent)         13C2 PFBA         50           05/23/22         Wellington Laboratories, Lot M8FDA017         (Purchased Reagent)         13C2 PFDA         50           05/23/22         Wellington Laboratories, Lot M8FDA017         (Purchased Reagent)         13C2 PFDA	5-NEtFOSAA 00006	08	WI	Lot d5NEtF		- 1	ent)	d5-NEtFOSAA	
08         07/05/22         WELLINGTON, Lot M282FTS0717         (Purchased Reagent)         M2-8:2FTS         47.9           3         07/13/22         Wellington Laboratories, Lot M2PFDA0216         (Purchased Reagent)         13C2-PFTBA         50           2         11/20/21         Wellington Laboratories, Lot M2PFTBA1117         (Purchased Reagent)         13C4-PFTBA         50           0         05/03/22         Wellington Laboratories, Lot M3PFPBA0517         (Purchased Reagent)         13C5-PFPBA         50           07/20/22         Wellington Laboratories, Lot M8FOSA1017         (Purchased Reagent)         13C5-PFPBA         50           10/11/22         Wellington Laboratories, Lot M8FDSA0417         (Purchased Reagent)         13C3-PFBA         50           04/12/22         Wellington Laboratories, Lot M8FDSA0417         (Purchased Reagent)         13C3-PFBA         50           05/24/22         Wellington Laboratories, Lot MPFDA0717         (Purchased Reagent)         13C3-PFBA         50           07/13/22         Wellington Laboratories, Lot MPFDA0717         (Purchased Reagent)         13C2-PFDA         50           05/23/22         Wellington Laboratories, Lot MPFHAA1017         (Purchased Reagent)         13C2-PFDA         50           05/17/22         Wellington Laboratories, Lot MPFHAA1017         (Purchase	2-6:FTS_00006	17		LINGTON, Lot M262FTS0217		- 1	ent)	M2-6:2FTS	
3     07/13/22 Wellington Laboratories, Lot M2PFNxDA0717     (Purchased Reagent)     13C2-PFNxDA     50       02/12/21     Wellington Laboratories, Lot M2PFDA0216     (Purchased Reagent)     13C2-PFTPDA     50       11/30/22     Wellington Laboratories, Lot M3PFPA0517     (Purchased Reagent)     13C4-PFPAA     50       07/20/22     Wellington Laboratories, Lot M8FDSA1017     (Purchased Reagent)     13C5-PFPAA     50       10/11/22     Wellington Laboratories, Lot M8FDSA1017     (Purchased Reagent)     13C5-PFPAA     50       04/12/22     Wellington Laboratories, Lot M8FDSA1017     (Purchased Reagent)     13C3-PFBA     50       05/24/22     Wellington Laboratories, Lot M8FDSA017     (Purchased Reagent)     13C3-PFBA     50       07/13/22     Wellington Laboratories, Lot M8FDA017     (Purchased Reagent)     13C3-PFBA     50       07/13/22     Wellington Laboratories, Lot MPFHAA1017     (Purchased Reagent)     13C2-PFDA     50       05/23/22     Wellington Laboratories, Lot MPFHAA1017     (Purchased Reagent)     13C2-PFDA     50       10/10/22     Wellington Laboratories, Lot MPFHAA1017     (Purchased Reagent)     13C2-PFDA     50       10/10/20/22     Wellington Laboratories, Lot MPFHAA1017     (Purchased Reagent)     13C2-PFHAA     50       10/10/20/22     Wellington Laboratories, Lot MPFHAA1017	2-8:2FTS 00008	07/05/22		( V I		- 1	ent)	M2-8:2FTS	o.
2 (2/12/21 Wellington Laboratories, Lot M2PFOA0216 (Purchased Reagent) 13C2-PFOA 50  11/30/22 Wellington Laboratories, Lot M4PFHpA0517 (Purchased Reagent) 13C3-PFPAA 50  10/10/22 Wellington Laboratories, Lot M8PFBA0117 (Purchased Reagent) 13C5-PFPAA 50  10/11/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C3-PFBA 50  10/11/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C3-PFBA 50  10/13/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C3-PFBA 50  10/13/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PBA0417 (Purchased Reagent) 13C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 13C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot M8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 Wellington Laboratories, Lot W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 W8PFAX1011 (Purchased Reagent) 18C2 PFDA 50  10/23/22 W8PFAX1017 (Purchased Reagent) 18C2 PFDA 50  10/23/22 W8PFAX1017 (Purchased	2PFHxDA_00013	07/13/22	is .	- 1	1717	- 1	ent)	13C2-PFHxDA	
2 11/30/22 Wellington Laboratories, Lot M2PFTeDA1117 (Purchased Reagent) 13C2-PFTeDA 50  05/03/22 Wellington Laboratories, Lot M3PFBA0517 (Purchased Reagent) 13C4-PFHpA 50  10/11/22 Wellington Laboratories, Lot M8FOSA1017 (Purchased Reagent) 13C8-PFPEA 50  10/11/22 Wellington Laboratories, Lot M8FDSA1017 (Purchased Reagent) 13C3-PFBS 60  05/24/22 Wellington Laboratories, Lot M8PBS0815 (Purchased Reagent) 13C2 PFDA 60  05/24/22 Wellington Laboratories, Lot M8PBS0815 (Purchased Reagent) 13C2 PFDA 60  05/23/22 Wellington Laboratories, Lot M8PBA0717 (Purchased Reagent) 13C2 PFDA 50  05/23/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 13C2 PFDA 50  05/23/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 13C2 PFDA 50  05/23/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFDA 50  05/217/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFBA 50  05/217/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFBA 50  05/217/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot M8PFBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot W8FBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot W8FBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot W8FBA0817 (Purchased Reagent) 18C2 PFBAA 50  05/217/22 Wellington Laboratories, Lot W8FBA0817 (Purchased Reagent) 18C2 PFBA 50  05/217/22 Wellington Laboratories, Lot W8FBA0817 (Purchased Reagent) 18C2 PFBA 50  05/217/22 W8FBA0818	2PFOA_00008	02/12/21		on Laboratories, Lot M2PFOA021	:16		ent)	13C2-PFOA	
05/03/22   Wellington Laboratories, Lot M4PFHpA0517   (Purchased Reagent)   13C4-PFHpA   50   10/12/22   Wellington Laboratories, Lot M5PEPeA0717   (Purchased Reagent)   13C5-PFPeA   50   50   10/11/22   Wellington Laboratories, Lot M8PEA0417   (Purchased Reagent)   13C4 PFBA   50   50   50   50   50   50   50   5	2PFTeDA_00012	11/30/22	_	Lot	117		ent)	13C2-PFTeDA	
07/20/22         Wellington Laboratories, Lot M8FOSA1071         (Purchased Reagent)         13C5-PFPeA         50           10/11/22         Wellington Laboratories, Lot M8FOSA1017I         (Purchased Reagent)         13C8 FOSA         50           04/12/22         Wellington Laboratories, Lot M8FBS0815         (Purchased Reagent)         13C3-PFBS         46.5           05/24/22         Wellington Laboratories, Lot M8FDA0717         (Purchased Reagent)         13C2 PFDA         46.5           07/13/22         Wellington Laboratories, Lot MPFDA0517         (Purchased Reagent)         13C2 PFDA         50           05/23/22         Wellington Laboratories, Lot MPFHAN3017         (Purchased Reagent)         13C2 PFDA         50           02/17/22         Wellington Laboratories, Lot MPFHAN3017         (Purchased Reagent)         13C2 PFDA         50           02/17/22         Wellington Laboratories, Lot MPFHAN3017         (Purchased Reagent)         13C2 PFHANS         50	4PFHPA 00012	05/03/22		ı	517	ı	ent)	13C4-PFHpA	
10/11/22Wellington Laboratories, Lot MPFBA0417(Purchased Reagent)13C8 FOSA5004/12/22Wellington Laboratories, Lot MPFBA0417(Purchased Reagent)13C3-PFBS46.505/24/22Wellington Laboratories, Lot MPFDA0717(Purchased Reagent)13C2-PFDA5005/23/22Wellington Laboratories, Lot MPFDA0517(Purchased Reagent)13C2-PFDAA5010/27/22Wellington Laboratories, Lot MPFMA1017(Purchased Reagent)13C2-PFDAA5002/17/22Wellington Laboratories, Lot MPFMAS0217(Purchased Reagent)13C2-PFMAS50	5PFPEA 00013	07/20/22		Lot	717		ent)	13C5-PFPeA	
04/12/22         Wellington Laboratories, Lot MPFBA0417         (Purchased Reagent)         13C4 PFBA         50           05/24/22         Wellington Laboratories, Lot MPFDA0717         (Purchased Reagent)         13C2 PFDA         46.5           07/13/22         Wellington Laboratories, Lot MPFDA0517         (Purchased Reagent)         13C2 PFDA         50           05/23/22         Wellington Laboratories, Lot MPFMAA0117         (Purchased Reagent)         13C2 PFDAA         50           02/17/22         Wellington Laboratories, Lot MPFMAS0217         (Purchased Reagent)         13C2 PFMAA         50           02/17/22         Wellington Laboratories, Lot MPFMAS0217         (Purchased Reagent)         13C2 PFMAS         47.3	8FOSA 00016	10/11/22	Wellington		17I		ent)	13C8 FOSA	
05/24/22Wellington Laboratories, Lot MPFDA0717(Purchased Reagent)13C3-PFBS46.507/13/22Wellington Laboratories, Lot MPFDA0717(Purchased Reagent)13C2 PFDA5005/23/22Wellington Laboratories, Lot MPFHXA1017(Purchased Reagent)13C2 PFDAA5010/27/22Wellington Laboratories, Lot MPFHXA1017(Purchased Reagent)13C2 PFHXA5002/17/22Wellington Laboratories, Lot MPFHXS0217(Purchased Reagent)1802 PFHXS47.3	PFBA 00013	04/12/22	Wellingto	Ι.	17	1	ent)	13C4 PFBA	
07/13/22 Wellington Laboratories, Lot MPFDA0717 (Purchased Reagent) 13C2 PFDA 50 05/23/22 Wellington Laboratories, Lot MPFHXA1017 (Purchased Reagent) 13C2 PFDAA 50 10/27/22 Wellington Laboratories, Lot MPFHXA1017 (Purchased Reagent) 13C2 PFHXA 50 02/17/22 Wellington Laboratories, Lot MPFHXS0217 (Purchased Reagent) 1802 PFHXS 47.3	PFBS 00006	05/24/22		on Laboratories, Lot M3PFBS081	115		ent)	13C3-PFBS	
05/23/22 Wellington Laboratories, Lot MPFDoA0517 (Purchased Reagent) 13C2 PFDoA 50 10/27/22 Wellington Laboratories, Lot MPFHxA1017 (Purchased Reagent) 1802 PFHxA 50 02/17/22 Wellington Laboratories, Lot MPFHxS0217 (Purchased Reagent) 1802 PFHxS 47.3	PFDA 00018	07/13/22	Wellingto	on Laboratories, Lot MPFDA071	17		ent)	13C2 PFDA	50 ug/mL
10/27/22 Wellington Laboratories, Lot MPFHxA1017 (Purchased Reagent) 13C2 PFHxA 50 02/17/22 Wellington Laboratories, Lot MPFHxS0217 (Purchased Reagent) 1802 PFHxS 47.3	PFDoA 00013	05/23/22		Lot	117		ent)		
02/17/22 Wellington Laboratories. Lot MPFHxS0217 (Purchased Reagent) 1802 PFHxS 47.3	PFHxA_00019	10/27/22		Lot	117		ent)		
	PFH×S 00013	02/17/22	Wellingto	Ç	.17		ant.)		C.

Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

Note					о С С С С С С	Parent Reagent	ıt		
19/19/22   Well-Institute Laboratorials   19/19/22   Well-Institute La		Exp Date	Prep Date	Dilutant Used	Final Volume		Volume	Analyte	Concentration
10.717/23   Wellington Indocratories, Low Mary Michigan Seagents   1304 Props.   100.717/23   Wellington Indocratories, Low Mary Michigan Seagents   1300 Laboratories, Low Mary Mary Mary Mark Michigan Seagents   1300 Laboratories, Low Mary Mary Mary Mark Michigan Seagents   1300 Laboratories   1	LCMPFNA 00013	09/30/21	Wellingt	on Laboratories,			ent)	13C5 PFNA	50 ug/mL
10.77/22   Wellington Laboratories, Lot MRPGASLID   Giverbased Resgent)   1304 PRDA   1504 Mellington Laboratories, Lot MRPGASLID   Giverbased Resgent)   1304 PRDA   1504 Mellington Laboratories, Lot MRPGASLID   Giverbased Resgent)   1304 PRDA   1504 Mellington Laboratories, Lot MRPGASLID   Giverbased Resgent)   1304 PRDA   1504 Mellington Laboratories, Lot MRPGASLID   Lot 1275 1000	LCMPFOA 00017	10/17/22	Wellingt	on Laboratories,	ı		ent)		
11.227/21   Wellington laboraticales, let Migrabilit 6   (Succioses Reagant)   13.52   FFURS   0.948	LCMPFOS 00025	10/11/22	Wellingt	on Laboratories,	Lot MPFOS1017	(Purchased Reag	ent)	13C4 PFOS	47.8 ug/mL
08/20/18   02/20/18   Methanol, Lot 09/285   10000 bil LC4:2FFF 50003   200 ub 5004um   5.044 m   11.14.24.74.PeptrInococleane   0.948   11.14.24.74.74.74.74.74.74.74.74.74.74.74.74.74	LCMPFUdA 00014	11/22/21	Wellingto	on Laboratories,	Lot MPFUdA1116	ರ	ent)	13C2 PFUnA	50 ug/mL
11   1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	.LCPFCSP 00132	08/20/18	02/20/18 N	Wethanol, Lot 090	2	LC4:2FTS 00003	200	Sodium	1
18,14,14,122 -perfluorocctane   0.396   18,14,14,14,124 -perfluorocctane   0.396   18,14,14,14,14,14,14,14,14,14,14,14,14,14,	I							1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
10.812PTS_00003						LC6:2FTS_00003		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6.2)	0.948 ug/mL
LGPERA 00005						LC8:2FTS_00003	1	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	0.958 ug/mL
Toping						LCN-EtFOSAA_00004	1	N-ethyl perfluorooctane sulfonamidoacetic acid	1 ug/mL
ICPEPSA 00007   200 ul Perfiloscobutanesulfonic acid   0.884						LCN-MeFOSAA_00005		N-methyl perfluorooctane sulfonamidoacetic acid	1 ug/mL
LOPENS						LCPFBA_00007		Perfluorobutyric acid	1 ug/mL
LOPPEDA 00008   200 uL Perfluorodecanoic acid   1						LCPFBS_00008			0.884 ug/mL
LOFPEDSA 00008						LCPFDA_00008		Perfluorodecanoic acid	1 ug/mL
LOPPERA 00002								Perfluorododecanoic acid	
						LCPFDSA 00002			
LCPFRHAR ORONG						LCPFHpA_00008		Perfluoroheptanoic acid (PFHpA)	
International Contract   International Contr						LCPFHpSA_00003		D.	0.952 ug/mL
CPERA 00009						LCPFHxA_00007		Perfluorohexanoic acid	Н
LCPFNA 00009						LCPFHxS-br_00004			0.91 ug/mL
								Perfluorononanoic acid	1 ug/mL
12/12/21   WELLINGTON, Lot 42FTS1216   CPFGARGE Reagent)   10/12/21   WELLINGTON, Lot 82FTS0816   CPFGARGE Reagent)   11/14, 24, 24-perfluorocctane   CPFGARGE Reagent)   CPFGARGE REAGENT   CPFGARGE REAGENT   CPFGARGE REAGENT   CPFGARGE REAGENT   CPFGARGE REAGENT   CPFGARGE RE								Perfluorononanesulfonic	
ICPFOS-br_00004   200 uL   Perfluoroctanesulfonic acid   0.928   ICPFOSA 00010   200 uL   Perfluoroctane Sulfonamide   1   ICPFPOSA 00007   200 uL   Perfluorocpentanoic acid   1   ICPFPOSA 00007   200 uL   Perfluorocpentanoic acid   1   ICPFTPOSA 00008   200 uL   Perfluorocpentanoic acid   0.938   ICPFTPOSA 00006   200 uL   Perfluoroctanecanoic acid   1   ICPFTPOSA 00006   200 uL   Perfluoroctanecanoic acid   1   ICPFTPOSA 00006   200 uL   Perfluoroctanecanoic acid   1   ICPFTPOSA 00007   200 uL   Perfluoroctanecanoic acid   2   ICPFTPOSA 00007   2   ICP						LCPFOA 00009		Perfluorooctanoic acid	
CPFPGA 00010   200 uL Perfluoroctane Sulfonamide   1   1   1   1   1   1   1   1   1						LCPFOS-br_00004		Perfluorooctanesulfonic acid (PFOS)	
12/12/21   WELLINGTON, Lot 42FTS1216   CPurchased Reagent)   CPURCHASED   CPU						LCPFOSA_00010		Perfluorooctane Sulfonamide	
12/12/21   WELLINGTON, Lot 62FTS0816   CPurchased Reagent)						LCPFPeA 00007		-	- 1
12/12/21						LCPFPes 00003	200 uL	_	0.938 ug/mL
12/12/21						LCPFTeDA_00006	200 uL	-	1 ug/mL
12/12/21   WELLINGTON, Lot 42FTS1216   LCPFUdA 00007   200 uL Perfluoroundecanoic acid   1						LCPFTrDA_00006		_	1 ug/mL
12/12/21   WELLINGTON, Lot 42FTS1216   (Purchased Reagent)   Sodium   46.7						LCPFUdA_00007	00:	Perfluoroundecanoic acid	1 ug/mL
06/25/21   WELLINGTON, Lot 62FTS0616   (Purchased Reagent)   Sodium	LC4:2FTS_00003	12/12/21	M	Lot	8121	(Purchased Reag	ent)	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	Q
1H,1H,2H,2H,2H-perfluorooctane	LC6:2FTS_00003	06/25/21	M	Lot	8061	(Purchased Reag	ent)	Sodium	47.4 ug/mL
08/22/21 WELLINGTON, Lot 82FTS0816 (Purchased Reagent)   Sodium 47.9   14,2H,2H-perfluorodecane   47.9								<pre>1H,1H,2H,2H-perfluorooctane sulfonate (6:2)</pre>	
	LC8:2FTS_00003	08/22/21	WE	Lot	S081	(Purchased Reag	ent)	Sodium 1H,1H,2H,2H-perfluorodecane	47.9 ug/mL

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SDG No.:

				Readent	Farent Keagent			
	EXD	Prep	Dilutant	Final	9A	Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID A	Added	Analyte	Concentration
.LCN-EtFOSAA_00004	09/30/21	WELLI	WELLINGTON, LOT NETFOSAA091	916	(Purchased Reagent)		N-ethyl perfluorooctane	50 ug/mL
.LCN-MeFOSAA_00005	10/12/21	MELLI	WELLINGTON, Lot NMeFOSAA0916	916	(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA_00007	05/27/21	Wellington	Laboratories, Lot	PFBA0516	(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
LCPFBS_00008	03/15/21	Wellingtor	Wellington Laboratories, Lot L	LPFBS0316	(Purchased Reagent)		Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
PFDA 00008	05/29/22		Wellington Laboratories, Lot E	PFDA0517	(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22			Lot PFDoA0517			Perfluorododecanoic acid	50 ug/mL
LCPFDSA_00002	05/24/21	Wellingtor		Lot LPFDS0516	(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00008	12/02/21	Wellingtor		Lot PFHpA1216	(Purchased Reagent)		Perfluoroheptanoic acid (PFHpA)	1m/mr
PFHpSA 00003	09/01/22		Wellington Laboratories, Lot LPFHpS0817	PFHpS0817	(Purchased Reagent)		Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA 00007	12/22/20		Wellington Laboratories, Lot PFHxA1215	FHxA1215	(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00004	07/03/20	Wellington	Wellington Laboratories, Lot brPFHxSK061	PFHxSK0615	(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA_00009	07/20/22	Wellingto	Wellington Laboratories, Lot E	Lot PFNA0717	(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS_00003	09/27/22	Wellingtor	Wellington Laboratories, Lot L	Lot LPFNS0917	(Purchased Reagent)		Perfluorononanesulfonic acid	48 ug/mL
.LCPFOA_00009	09/27/22	Wellingto		Lot PFOA0917	(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
LCPFOS-br_00004	10/14/20	Wellington	Wellington Laboratories, Lot br	t brPFOSK1015	(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
.LCPFOSA 00010	09/30/21	Wellingtor	Wellington Laboratories, Lot F	Lot FOSA0916I	(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA 00007	05/31/21	Wellingtor		Lot PFPeA0516	(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
.LCPFPes 00003	01/11/22	Wellington		Lot LPFPeS0117	(Purchased Reagent)		Perfluoropentanesulfonic acid	46.9 ug/mL
.LCPFTeDA 00006		Wellington	Lot	Lot PFTeDA1215			Perfluorotetradecanoic acid	20 ng/mT
.LCPFTrdA_00006	02/12/21	Wellington	Wellington Laboratories, Lot PE	PFTrDA0216	(Purchased Reagent)		Perfluorotridecanoic acid	20 ng/mL
LCPFUda_00007	10/18/21	Wellingtor	Wellington Laboratories, Lot P	Lot PFUdA1016	(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC LL5 00005	11/18/18	06/05/18 Me	MeOH/H20, Lot 090285	200 mL L	LCMPFC ALL SU 00075	10 mL (	d3-NMeFOSAA	2.5 ng/mL
1					   	10	d5-NEtFOSAA	2.5 ng/mL
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C3-PFBS	2.325 ng/mL
						1	13C2 PFDA	2.5 ng/mL
							13C2 PFDoA	2.5 ng/mL
							13C2 PFHxA	2.5 ng/mL
						1	1802 PFHxS	2.365 ng/mL
							13C5 PFNA	2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C4 PFOS	2.39 ng/mL

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					Parent Reagent		
	[±	D d d		Reagent .		emit [O]	
Reagent ID	Date	rrep Date	Used	Volume	Reagent ID	Added Analyte	Concentration
					LCPFCSP_00148	1000 uL Sodium 1H,2H,2H,2H-perfluorohexane sulfonate (4:2)	2.335 ng/mL
						Sodium 1H, 2H, 2H-perfluorooctane sulfonate (6:2)	2.37 ng/mL
						Sodium 1H, 2H, 2H-perfluorodecane sulfonate (8:2)	2.395 ng/mL
						N-ethyl perfluorooctane sulfonamidoacetic acid	2.5 ng/mL
							2.5 ng/mL
						Perfluorobutyric acid	2.5 ng/mL
						_	
						Periluorodecanolo acid	2.5 ng/mL
						Perfluorodecane Sulfonic acid	2.41 ng/mL
						Perfluoroheptanoic acid (PFHpA)	2.5 ng/mL
						Perfluoroheptanesulfonic acid	2.38 ng/mL
							2.5 ng/mL
						Perfluorohexanesulfonic acid (PEHxS)	2.275 ng/mL
						rononanoic acid	2.5 ng/mL
							2.4 ng/mL
						Perfluorooctanesulfonic acid	2.32 ng/mL
						Perfluorooctane Sulfonamide	2.5 ng/mL
						Perfluoropentanoic acid	2.5 ng/mL
							2.345 ng/mL
						Periluorotetradecanoic acid	2.5 ng/mL
						Perfluoroundecanoic acid	2.5 ng/mL
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18	Methanol, Lot Baker 141039	200 mL	LCd3-NMeFOSAA_00008	200 uL d3-NMeFOSAA	
					LCd5-NEtFOSAA 00008	ηľ	
					LCM2-6:FTS 00008	ηľ	
				•	LCM2-8:2FTS 00010	200 uL M2-8:2FTS	0.0479 ug/mL
					TCM2PFOA 00008	3 12	0.05 ug/mT
					LCM2PFTeDA 00014	u.	0.05 ug/mL
					LCM4PFHPA 00014	uL	
						ηŢ	0.05 ug/mL
					LCM8FOSA 00019	u.	0.05 ug/mL
					LCMPFBA 00015	200 ul 13C4 PFBA	Jm/bn c0.0
	_	_				3	

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					Parent Readent			
	ŗ	ţ		Reagent		- 1		
Reagent ID	Exp Date	rep Date	Used Vo.	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
					LCMPFDA 00020	200 uL	13C2 PFDA	0.05 ug/mL
				ļΗ	LCMPFDoA 00015	200 uL	13C2 PFDoA	
				ļH.	LCMPFHxA 00022	200 uL	13C2 PFHxA	
				ļH	LCMPFHxS 00015	200 uL	1802 PFHxS	0.0473 ug/mL
				IH	LCMPFNA 00015	200 uL	13C5 PFNA	0.05 ug/mL
				Н	LCMPFOA_00019	200 uL	13C4 PFOA	0.05 ug/mL
				Н	LCMPFOS_00027	200 uL		0.0478 ug/mL
				Н	LCMPFUda 00017	200 uL	13C2 PFUnA	0.05 ug/mL
LCd3-NMeFOSAA_00008	11/08/22	WELI			(Purchased Reagent)	nt)	d3-NMeFOSAA	50 ug/mL
LCd5-NEtFOSAA_00008	11/08/22	WELI	WELLINGTON, Lot d5NEtFOSAA1117		(Purchased Reagent)	nt)	d5-NetFOSAA	20 ng/mF
LCM2-6:FTS_00008	02/16/23	WE	WELLINGTON, Lot M262FTS0218			nt)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00010	/24/	WE	WELLINGTON, Lot M282FTS0118		- 1	nt)	M2-8:2FTS	- 1
LCM2PFHxDA 00016		Wellingto		40717	- 1	nt)	13C2-PFHxDA	
LCM2PFOA_00008	02/12/21	Wellingt	Wellington Laboratories, Lot M2PFOA0216	0216	- 1	nt)	13C2-PFOA	50 ug/mL
LCM2PFTeDA_00014	11/30/22	Wellingto	Wellington Laboratories, Lot M2PFTeDA111	A1117	- 1	nt)	13C2-PFTeDA	50 ug/mL
LCM4PFHPA_00014	05/03/22	Wellingto	Wellington Laboratories, Lot M4PFHpA051	.0517	- 1	nt)	13C4-PFHpA	50 ug/mL
LCM5PFPEA_00015	07/20/22	Wellingto		.0717		nt)	13C5-PFPeA	20 ng/mF
LCM8FOSA_00019	10/11/22	Wellingto	$\Box$	017I		nt)		50 ug/mL
LCMPFBA_00015	02/16/23	Wellingt		218	(Purchased Reagent)	nt)	13C4 PFBA	50 ug/mL
LCMPFBS_00008	02/15/23	Wellingt	Wellington Laboratories, Lot M3PFBS0218	0218	(Purchased Reagent)	nt)	13C3-PFBS	46.5 ug/mL
LCMPFDA_00020	02/16/23	Wellingt	Lot	218		nt)	13C2 PFDA	50 ug/mL
LCMPFDOA 00015	02/16/23	Wellington	on Laboratories, Lot MPFDoA0218	0218	(Purchased Reagent)	nt)	13C2 PFDoA	50 ug/mL
LCMPFHxA 00022	10/27/22	Wellingt	Wellington Laboratories, Lot MPFHxA1017	1017	(Purchased Reagent)	nt)	13C2 PFHxA	50 ug/mL
LCMPFHxS 00015	03/22/23	Wellingt	Wellington Laboratories, Lot MPFHxS0318	0318	(Purchased Reagent)	nt)	1802 PFHxS	47.3 ug/mL
LCMPFNA 00015	12/14/22	Wellingt		217	(Purchased Reagent)	nt)		50 ug/mL
LCMPFOA 00019	05/04/23	Wellingt	Wellington Laboratories, Lot MPFOA0418	418	(Purchased Reagent)	nt)	13C4 PFOA	50 ug/mL
LCMPFOS 00027	02/15/23	Wellingt	Wellington Laboratories, Lot MPFOS0218	218	(Purchased Reagent)	nt)	13C4 PFOS	47.8 ug/mL
LCMPFUda 00017	11/22/21	Wellingt	Wellington Laboratories, Lot MPFUdA111	1116		nt)	13C2 PFUnA	50 ug/mL
.LCPFCSP 00148	11/18/18	05/17/18	0285	10 mL I		100 uL	Sodium	0.467 ug/mL
I					I		$\sim$	•
							sulfonate (4:2)	
				Н	LC6:2FTS_00007	100 uL	Sodium	0.474 ug/mL
							1H, 1H, 2H, 2H-perfluorooctane	
					T.C8:2FTS 00007	100 11T.		0.479 11g/mT,
							1H,1H,2H,2H-perfluorodecane	
							sulfonate (8:2)	
				Н	LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane	0.5 ug/mL
				JH	LCbr-NMeFOSAA 00001	100 uL	10	0.5 ug/mL
					I		sulfonamidoacetic acid	
				Н	LCPFBA_00008	100 uL	Perfluorobutyric acid	0.5 ug/mL
				Н	LCPFBS_00009	100 uL	Perfluorobutanesulfonic acid	0.442 ug/mL
					0 0 0 0 0	T:: 001		- 1
				-11-	CFFUA UUUU8		Periluorodecanoic acid	
				-11-	TOPEDS 00008	100 uL	Periluorodecanoic acid	0.0 ug/mL
				11=	LCPFHDA 00011			
				1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		(PFHpA)	
-								-

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					Parent Readent			
	ı	-		Reagent _		1 1		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
					LCPFHpSA 00003	100 uL	Perfluoroheptanesulfonic acid	0.476 ug/mL
					LCPFHxA_00010	100 uL	Perfluorohexanoic acid	
				1	LCPFHxS-br_00006	100 uL	Perfluorohexanesulfonic acid (PFHxS)	0.455 ug/mL
				1	LCPFNA_00010	100 uL	prononanoic acid	0.5 ug/mL
								0.5005 ug/mL
						- 1	Perfluorononanesulfonic acid	
					LCPFOA 00011			
					LCPFOS-br_00007	100 uL	Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
				-	LCPFOSA 00013	100 uL	Perfluorooctane Sulfonamide	0.5 ug/mL
					LCPFPeA 00008	100 uL	Perfluoropentanoic acid	0.5 ug/mL
				1	LCPFPes 00003	100 uL	Perfluoropentanesulfonic acid	0.469 ug/mL
					LCPFTeDA 00008	100 uL	Perfluorotetradecanoic acid	0.5 ug/mL
				1	LCPFUDA 00008	100 uL	Perfluoroundecanoic acid	0.5 ug/mL
LC4:2FTS_00005	12/12/21	WE	WELLINGTON, Lot 42FTS1216		(Furchased Reagent)		Sodium 1H,1H,2H,2H-perfluorohexane	
	0				- 1		sulfonate (4:2)	
LC6:2FTS_00007	04/20/22	WE	Lot		(Purchased Reagent)	nt)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mī
LC8:2FTS_00007	12/12/21	WE	WELLINGTON, LOt 82FTS1216		(Furchased Reagent)	nt)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCbr-NEtFOSAA_00001	01/17/23	WELLI	WELLINGTON, Lot brNEtFOSAA0118	8	(Purchased Reagent)	nt)	N-ethyl perfluorooctane sulfonamidoacetic acid	20 ng/mL
LCbr-NMeFOSAA_00001	01/17/23	WELLI	WELLINGTON, Lot brNMeFOSAA0118	8	(Purchased Reagent)	nt)	N-methyl perfluorooctane sulfonamidoacetic acid	20 ng/mr
LCPFBA_00008	05/29/22	Wellingt	Wellington Laboratories, Lot PFBA051	40517	(Purchased Reagent)	nt)	Perfluorobutyric acid	20 ng/mL
LCPFBS_00009	09/21/22	Wellingto	Wellington Laboratories, Lot LPFBS091	180917	(Purchased Reagent)	nt)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	05/29/22	Wellingt	Wellington Laboratories, Lot PFDA051	40517	(Purchased Reagent)	nt)	Perfluorodecanoic acid	20 ng/mL
LCPFDOA_00008	05/29/22		Laboratories, Lot	A0517		nt)	Perfluorododecanoic acid	20 ng/mF
LCPFDS 00008	11/08/22		Laboratories, Lot	S1117	- 1	nt)	Perfluorodecane Sulfonic acid	- 1
LCPFHpA_00011	09/27/22	Wellington	on Laboratories, Lot PFHpA091	A0917	(Purchased Reagent)	ıt)	Perfluoroheptanoic acid (PFHpA)	50 ug/mL
LCPFHpSA 00003	09/01/22	Wellingto	Wellington Laboratories, Lot LPFHp	LPFHpS0817	(Purchased Reagent)	nt)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellingto	ľ	A0917	(Purchased Reagent)	nt)	Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00006	01/04/22	Wellington	Wellington Laboratories, Lot brPFHxSK011	xSK0117	(Purchased Reagent)	nt)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA_00010	07/20/22	Wellingt	Wellington Laboratories, Lot PFNA	PFNA0717	(Purchased Reagent)	nt)	acid	
TOOOO	00/10/00	T-M	Mark Total T	71000	(+x)	+ 0	Perfluorooctanoic acid (PFOA)	0.05 ug/mL
1. L(FF NS 00003	09/21/22	WELLLIIG LC		150917		11.)		40 ug/mL
LCPFOS-br_00007	01/12/22	Wellingtor	ot bi	SK0117		nt)	fonic	
LCPFOSA 00013	09/01/22	Wellington	Laboratories, Lot	FOSA0817I	(Purchased Reagent)	nt)	Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA_00008	06/14/22	Wellington	Laboratories, Lot	PFPeA0617	(Purchased Reagent)	ıt)	Perfluoropentanoic acid	20 ng/mL

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10   10   10   10   10   10   10   10	Date				д 6 7 6 6 7 6 7 6 7 7 8	Parent Reagent	ıt		
Wellington Laboratories, LOT LEFPENDING   Perribased Reagent   Perribotrochargeanolic acid	Wellington Laboratories, lot EPPE-8017	Exp Date	Prep Date	Dilutant Used	Final		Volume Added	Analyte	Concentration
Wellington laboratories, Lot PFTPADA016   CPurchased Reagent)   Perfluororuidecanoic acid	Wellington Laboratories, Lot PFTPAN015	01/11/22		Lot	LPFPeS0117	1	ent)		46.9 ug/mL
Wellington laboratories, Lot PFUGAIDS   CPUTCHASSED Reagent)   Perfilocoundecanoic acid	Weilington is about of the PRTANDING Not Character Reagent)         (Purchased Reagent)         Perfluorcoundecanoic acid Conferenced Reagent)         Perfluorcoundecanoic acid Conference Realization acid Conference Real	09/30/21		Lot	PFTeDA0916		ent)	Perfluorotetradecanoic acid	20 ng/mL
Wellington Laboratories, lot FFUGA1016   CPurchased Reagent)   Perfluctoundecanoic acid	Wellington Laboratories, Lot FFUGAID16   Perflucroundecanoic coid	05/02/22		Lot	PFTrDA0517		ent)	Perfluorotridecanoic acid	50 ug/mL
Definition   Def	Description   Description   Description   Description	10/18/21	Wellington	Laboratories,	PFUdA1016		ent)	Perfluoroundecanoic acid	20 ng/mI
d5-NEFEOSAA     M2-6:2FTS   M2-8:2FTS	M2-6.7ETS	-		Lot	200 mL	LCMPFC ALL SU 00041		<b>⊢</b>	2.5 ng/mL
M2-6:2FTS  M2-8:2FTS  13C2-PFHXDA 13C2-PFPGA 13C3-PFPGA 13C3-PFPGA 13C3-PFPGA 13C3-PFBA 13C3-PFBA 13C3-PFBA 13C3-PFBA 13C2 PFDAA 13C3-PFBAA 13C4 PFOA 13C4 PFOA 13C5 PFNAA 13C6 PFNAA 13C7 PFDAA 13C7 PFDAA 13C8 PFDAA 13C8 PFDAA 13C9 PFDAA 13C9 PFDAA 13C1 PFDAA 13C2 PFHXAA 13C2 PFNAA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C6 PFNAA 13C7 PFNAA 13C7 PFNAA 13C8 PFNAA 13C8 PFNAA 13C9 PFNAA 13C9 PFNAA 13C1 PFNAA 13C1 PFNAA 13C1 PFNAA 13C2 PFNAA 13C4 PFOA 13C2 PFNAA 13C4 PFOA 13C6 PFNAA 13C6 PFNAA 13C6 PFNAA 13C7 PFNAA 13C7 PFNAA 14, 14, 24, 24-perfluorodeca 2016 N-methyl perfluoroctane 2016 N-methyl perfluoroctane 2016 Perfluorodecanoic acid 2016 Perfluorodecanoic acid 2016 Perfluoroheptanesulfonic 2016 Perfluoroheptanesulfonic 2016 Perfluorohexanoic acid 2017 PERFLUOROH	M2-6:2FTS M2-8:2FTS 13C2-PFHXDA 13C2-PFDAA 13C2-PFPDA 13C3-PFPBA 13C3-PFPBA 13C3-PFBA					 		d5-NEtFOSAA	2.5 ng/mL
M2-8:2FTS 13C2-PFHXDA 13C2-PFDA 13C3-PFPBA 13C3-PFPBA 13C3-PFBA 13C3-PFBA 13C2 PFHXA 13C2 PFHXA 13C2 PFHXA 13C2 PFHXA 13C2 PFUAA 13C2 PFUAA 13C3 PFDA 13C2 PFUAA 13C4 PFOA 13C5 PFUAA 13C5 PFUAA 13C6 PFUAA 13C7 PFUAA 13C7 PFUAA 13C8 PFOA 13C8 PFOA 13C9 PFUAA 13C1 PFOA 13C1 PFOA 13C1 PFOA 13C2 PFUAA 13C2 PFUAA 13C2 PFUAA 13C2 PFUAA 13C4 PFOA 13C6 PFUAA 13C7 PFUAA 13C7 PFUAA 13C8 PFUAA 13C8 PFUAA 13C9 PFUAA 13C9 PFUAA 13C9 PFUA 13C1 PFUA 14, 2H, 2H, 2H-Perfluoroctane 201 Fondium 1H, 1H, 2H, 2H-Perfluoroctane 201 Fondium 1H, 1H, 2H, 2H-Perfluoroctane 201 Fondium 201 Forfluoroctane 201 Forfluoroctane 201 Forfluorodecanoic acid 201 Forfluoroheptanesulfonic 201 Forfluorohexanoic acid 201 Forfluorohexanoic	M2-8:2FTS 13C2-PFHXDA 13C2-PFDA 13C3-PFPBA 13C3-PFPBA 13C3-PFBA 13C3-PFBA 13C2 PFHXA 13C2 PFUNA 13C4 PFOA 13C5 PFNA 13C4 PFOA 13C5 PFNA 13C6 PFNA 13C7 PFOA 13C7 PFOA 13C8 PFOA 13C8 PFOA 13C8 PFOA 13C9 PFNA 13C1 PFOA 13C1 PFOA 13C2 PFUNA 13C1 PFNA 13C2 PFUNA 13C2 PFUNA 13C4 PFOA 13C6 PFNA 13C6 PFNA 13C6 PFNA 13C6 PFNA 13C7 PFNA 13C7 PFNA 13C8 PFOA 13C8 PFNA 13C9 PFNA 13C9 PFNA 13C1 PFNA 13C1 PFNA 13C1 PFNA 13C1 PFNA 13C2 PFNA 13C2 PFNA 13C2 PFNA 13C2 PFNA 13C4 PFOA 13C4 PFOA 13C6 PFNA 13C6 PFILUOTODECACIO C C C PETILUOTODECANOIC C C C C C C C C C C C C C C C C C C							M2-6:2FTS	
13C2-PFNAA 13C2-PFDA 13C2-PFDA 13C3-PFPEA 13C3-PFBA 13C3-PFBA 13C3-PFBA 13C2-PFNAA 13C3-PFNAA 13C4-PFNAA 13C4-	13C2-PFNAA 13C2-PFDA 13C2-PFDA 13C3-PFPBA 13C3-PFBA 13C3-PFBA 13C3-PFBA 13C2-PFNAA 13C3-PFNAA 13C3-PFBA 13C2-PFNAA 13C3-PFBA 13C2-PFNAA 13C3-PFNAA 13C3-PFNAA 13C4-PFNAA 13C4-PFNAA 13C4-PFNAA 13C5-PFNAA 13C5-PFNAA 13C5-PFNAA 13C5-PFNAA 13C6-PFNAA 13C6-PF							M2-8:2FTS	2.395 ng/mL
13C2-PFDA 13C4-PFHDA 13C4-PFHDA 13C4-PFHDA 13C4-PFBA 13C4-PFBA 13C4-PFBA 13C4-PFBA 13C4-PFBA 13C4-PFBA 13C2-PFDA 13C2-PFDA 13C2-PFDA 13C2-PFDA 13C2-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C4-PFDA 13C5-PFBA 13C5-PFBA 13C6-PFBA 13C	13C2-PFDA 13C4-PFHDA 13C4-PFHDA 13C4-PFHDA 13C5-PFBA 13C4 PFBA 13C4 PFBA 13C4 PFBA 13C4 PFDA 13C5 PFDA 13C6 PFDA 13C7 PFDA 13C7 PFDA 13C8 PFDA 13C8 PFDA 13C8 PFDA 13C9 PFDA 13C9 PFDA 13C9 PFDA 13C1 PFDA 13C1 PFDA 13C2 PFDA 13C4 PFCO 13C6 PETILOCOCCTAN 14, 14, 24, 24-perfluorocctane 14, 16, 24, 24-perfluoroc							13C2-PFHxDA	
13C2-PFTeDA 13C4-PFHpA 13C5-PFPeA 13C8 FOSA 13C8 FFDA 13C2 PFDA 13C2 PFDA 13C2 PFNA 13C2 PFNA 13C4 PFOA 13C6 PFNA 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 16, 15, 16, 16 16, 16, 16, 16 16, 16, 16 16, 16, 16 16	13C2-PFTeDA 13C4-PFHpA 13C5-PFPeA 13C8 FOSA 13C4 PFBA 13C2 PFDA 13C2 PFDA 13C2 PFDA 13C2 PFNA 13C4 PFDA 13C2 PFNA 13C4 PFOS 13C6 PFINA 13C6 PFINO Nethyl perfluoroctane sulfonamidoacetic acid Nethyl perfluoroctane sulfonamidoacetic acid Nethyl perfluoroctane sulfonamidoacetic acid Perfluorobecanoic acid Perfluorobecanoic acid Perfluorobecanoic acid (PFHBA) Perfluorobecanoic acid							13C2-PFOA	
13C4-PFHpA 13C5-PFPEA 13C8 FOSA 13C3 PFBA 13C2 PFDA 13C2 PFDA 13C2 PFRAA 13C2 PFRAA 13C2 PFRAA 13C2 PFRAA 13C4 PFOA 13C6 PFUNA 14,14,24,24-perfluorooctane sulfonate (6:2) Sodium 14,14,24,24-perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutopric acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecane Sulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHAA) Perfluoroheptanesulfonic	13C4-PFHpA 13C5-PFPEA 13C8 FOSA 13C3 PFBA 13C2 PFDA 13C2 PFRAA 13C2 PFRAA 13C2 PFRAA 13C2 PFRAA 13C2 PFRAA 13C4 PFOA 13C6 PFUNA 14,14,24,24-Perfluorooctane sulfonate (6:2) Sodium 14,14,24,24-Perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutopric acid Perfluorobecanoic acid							13C2-PFTeDA	مال
13C5-PFPeA 13C8 FOSA 13C4 PEBA 13C2 PEDAA 13C2 PFDAA 13C2 PFDAA 13C2 PFRAA 13C2 PFRAA 13C4 PFOS 13C6 PFUNA 13C7 PFUNA 13C7 PFUNA 13C8 PFUNA 13C8 PFUNA 13C9 PFUNA 13C9 PFUNA 13C6 PFUNA 13C7 PFUNA 13C7 PFUNA 13C8 PFUNA 13C8 PFUNA 13C9 PFUNA 14, 1H, 2H, 2H-PErfluorodeca 201 FONDAUTAIC acid 16 PERFLUORODECANOIC acid 17 PERFLUORODECANOIC acid 17 PERFLUORODECANOIC acid 18 PERF	13C5-PFPeA 13C8 FOSA 13C4 PEBA 13C2 PFDA 13C4 PFOS 13C6 PFUNA 13C7 PFUNA 13C7 PFUNA 13C8 PFUNA 13C8 PFUNA 13C9 PFUNA 13C9 PFUNA 13C6 PFUNA 13C7 PFUNA 13C7 PFUNA 13C8 PFUNA 13C8 PFUNA 13C9 PFUNOCOCTA 13C9 PCFUNOCOCTA 13C9 PCFUNOCOCCTA 13C9 PCFUNOCOCT							13C4-PFHpA	
13C4 PFBA 13C3 - PFBA 13C3 - PFBA 13C2 PFDAA 13C2 PFDAA 13C2 PFWAA 13C4 PFOA 14, 14, 24, 24-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorodecanoic acid Perfluorodecane Sulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHAA) Perfluorohexanoic acid	13C4 PFBA 13C3-PFBS 13C3-PFBS 13C2 PFDA 13C2 PFDAA 13C2 PFWAA 13C2 PFWAA 13C4 PFOA 13C6 PFWAA 13C6 PFWAA 13C7 PFWAA 13C6 PFWAA 13C7 PFWAA 13C8 PFWAA 14, 1H, 2H, 2H-Perfluorodeca 20cd um 1H, 1H, 2H, 2H-Perfluorodeca 20cd um							13C5-PFPeA	2.5 ng/mL
13C3 PFBA 13C3 PFDA 13C2 PFDA 13C2 PFDAA 13C2 PFNAA 13C4 PFOA 13C5 PFNAA 13C4 PFOA 13C4 PFOA 13C6 PFNAA 13C7 PFUAA 13C7 PFUAA 13C8 PFUAA 13C9 PFUAA 13C9 PFUAA 13C9 PFUAA 13C1 PFUAA 13C1 PFUAA 13C2 PFUAA 13C2 PFUAA 13C2 PFUAA 13C4 PFOS 13C2 PFUAA 13C4 PFOS 14C1 LH, 1H, 2H, 2H-perfluorobecas sulfonate (8:2) Nethyl perfluoroctane sulfonate (8:2) Nethyl perfluoroctane sulfonamidoacetic acid Nethyl perfluoroctane sulfonamidoacetic acid Perfluorobutanesulfonic acid Perfluorobecanoic acid Perfluorobeptanoic acid (PFBS) Perfluorobeptanosulfonic Perfluorobexanoic acid (PFHPA) Perfluorobexanoic acid	13C3 PFBA 13C3 PFDA 13C2 PFDA 13C2 PFWAA 13C2 PFWAA 13C4 PFOA 13C5 PFWA 13C4 PFOA 13C5 PFWAA 13C4 PFOA 13C6 PFWAA 13C7 PFWAA 13C7 PFWAA 13C8 PFWAA 13C8 PFWAA 13C9 PFWAA 13C9 PFWAA 13C4 PFOA 13C6 PFWAA 14, 14, 24, 24-perfluorooctan sulfonate (6:2) Sodium 14, 14, 24, 24-perfluorooctan sulfonate (8:2) Nethyl perfluorooctane sulfonamidoacetic acid Nethyl perfluorooctane sulfonamidoacetic acid Nethyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroheptanoic acid (PFBS) Perfluoroheptanosulfonic Perfluorohexanoic acid (PFHPA) Perfluorohexanoic acid (PFHPA) Perfluorohexanoic acid (PFHDA) Perfluorohexanoic acid							13C8 FOSA	
13C2 PFDA 13C2 PFDA 13C2 PFDA 13C2 PFHXA 13C2 PFHXA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C5 PFUAA 13C6 PFUAA 13C6 PFUAA 13C7 PFUAA 13C7 PFUAA 13C8 PFUAA 14, 14, 24, 24-perfluorooctas sulfonate (6:2) Sodium 14, 14, 24, 24-perfluorooctane sulfonate (6:2) Sodium 14, 14, 24, 24-perfluorooctane sulfonate (8:2) Nethyl perfluorooctane sulfonamidoacetic acid Nethyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanoic acid (PFB) Perfluorobetanoic acid (PFB) Perfluorobetanoic acid (PFHAA) Perfluorobetanoic acid (PFHAA)	13C2 PFDA 13C2 PFDA 13C2 PFNAA 13C2 PFNAA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C5 PFNAA 13C6 PFNAA 13C6 PFNAA 13C7 PFUAA 13C7 PFUAA 13C8 PFUAA 13C8 PFUAA 13C8 PFUAA 14, 14, 24, 24-perfluorooctas sulfonate (6:2) Sodium 14, 14, 24, 24-perfluorooctane sulfonate (6:2) Sodium 14, 14, 24, 24-perfluorooctane sulfonate (8:2) Nethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic acid Perfluorodecanoic acid Perfluorobecanoic acid (PFBS) Perfluorobeptanesulfonic Perfluorobexanoic acid (PFHPA) Perfluorobexanoic acid Perfluorobexanoic acid (PFHPA) Perfluorobexanoic acid (PFHPA) Perfluorobexanoic acid								
13C2 PFDA  13C2 PFDAA  13C2 PFHXAA  18O2 PFHXAS  13C4 PFOA  13C5 PFUNA  13C5 PFUNA  13C6 PFUNA  13C7 PFUNA  14 14, 24, 24-perfluorohexa  sulfonate (4:2) Sodium  14, 14, 24, 24-perfluoroctane sulfonate (6:2) Sodium  14, 14, 24, 24-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecane Sulfonic Perfluoroheptanoic acid (PFHBA) Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHBA) Perfluoroheptanesulfonic	13C2 PFDA 13C2 PFDA 13C2 PFHXA 18O2 PFHXS 13C4 PFOA 13C5 PFUNA 13C4 PFOA 13C5 PFUNA 13C6 PFUNA 13C6 PFUNA 13C7 PFUNA 14, 2H, 2H-Perfluorohexa sulfonate (4:2) Sodium 1H, 1H, 2H, 2H-Perfluoroctane sulfonate (6:2) Sodium 1H, 1H, 2H, 2H-Perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFB) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanesulfonic Perfluorohexanoic acid (PFHA) Perfluorohexanoic acid							13C3-PFBS	2.325 ng/mL
13C2 PFDOA 13C2 PFHXA 18C2 PFHXS 18C3 PFHXA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C6 INA 11C1 LH, 2H, 2H-perfluorohexa sulfonate (4:2) Sodium 1H, 1H, 2H, 2H-perfluoroctan sulfonate (6:2) Sodium 1H, 1H, 2H, 2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanoic acid Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid (PFBA) Perfluorohexanoic acid (PFBA) Perfluorohexanoic acid	13C2 PFDOA  13C2 PFHXA 18C2 PFHXS 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C4 PFOA 13C6 PEUDA 13C6 PEUDA 14. 14, 24, 24-perfluoroctas sulfonate (4:2) Sodium 14. 14, 24, 24-perfluoroctane sulfonate (8:2) Sodium 14. 14, 24, 24-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroceane Sulfonic Perfluoroceane Sulfonic Perfluorobexanoic acid (PFHAA) Perfluorobexanoic acid							13C2 PFDA	
13C2 PFHXA 18C2 PFNA 18C4 PFNA 13C4 PFNA 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 14, 14, 24, 24-perfluoroctane 16, 17, 14, 24, 24-perfluoroctane 16, 17, 14, 24, 24-perfluoroctane 16, 16, 17, 17, 17, 17, 17, 17, 17, 17, 17, 17	13C2 PFHXA 18C2 PFNA 18C4 PFNA 13C4 PFNA 14, 2H-perfluoroctane 14, 1H, 2H, 2H-perfluoroctane 14, 1H, 2H, 2H-perfluoroctane 15 Sodium 14, 1H, 2H, 2H-perfluoroctane 16 Sodium 16 N-ethyl perfluoroctane 17 Sodium 17 N-ethyl perfluoroctane 18 Sulfonate 18 Sulfonate 18 Perfluorodecanoic acid 18 Perfluorodecanoic acid 18 Perfluorobetanoic acid 18 Perfluorobetanoic acid 18 Perfluorobetanesulfonic 18 Perfluorobexanoic acid								2.5 ng/mL
1802 PFHXS  13C5 PFNA  13C4 PFOA  13C4 PFOS  13C2 PFUNA  1 mL Sodium  1H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium  1H,1H,2H,2H-perfluorocta sulfonate (6:2) Sodium  1H,1H,2H,2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobetic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanoic acid Perfluoroheptanoic acid (PFHPA) Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid	1802 PFHXS  13C5 PFNA  13C4 PFOA  13C4 PFOS  13C2 PFUNA  1 mL Sodium  1H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium  1H,1H,2H,2H-perfluorocta sulfonate (6:2) Sodium  1H,1H,2H,2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobecanoic acid Perfluorodecanoic acid Perfluorobecanoic acid Perfluorobecanoic acid Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid (PEHBA) Perfluorohexanoic acid								
13C4 PFOA  13C4 PFOA  13C4 PFOA  13C4 PFOS  13C2 PFUNA  1 mL Sodium  1 H, 1H, 2H, 2H-perfluorohexa sulfonate (4:2) Sodium  1 H, 1H, 2H, 2H-perfluoroocta sulfonate (6:2) Sodium  1 H, 1H, 2H, 2H-perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PFBS) Perfluorobecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid	13C4 PFOA  13C4 PFOA  13C4 PFOA  13C4 PFOS  13C2 PFUNA  1 mL Sodium  1 H, 1H, 2H, 2H-perfluorohexa sulfonate (4:2) Sodium  1H, 1H, 2H, 2H-perfluorocta sulfonate (6:2) Sodium  1H, 1H, 2H, 2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobetanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanosulfonic Perfluorohexanoic acid (PFHPA) Perfluorohexanoic acid								
13C4 PFOA  13C2 PFUnA  1 mL Sodium  1 H,1H,2H,2H-perfluorooctasulfonate (4:2) Sodium  1 H,1H,2H,2H-perfluorooctane Sulfonate (6:2) Sodium  1 H,1H,2H,2H-perfluorooctane Sulfonate (8:2) N-ethyl perfluorooctane Sulfonamidoacetic acid N-methyl perfluorooctane Sulfonamidoacetic acid N-methyl perfluorooctane Sulfonamidoacetic acid Perfluorobutanesulfonic a(PFBS) Perfluorobecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanoic acid Perfluorobetanoic acid (PFBS) Perfluorobetanoic acid (PFBS) Perfluorobetanoic acid (PFHBA) Perfluorobetanoic acid (PFHBA) Perfluorobetanoic acid	13C4 PFOA  13C2 PFUnA  13C2 PFUnA  1 ML Sodium  1 H,1H,2H,2H-perfluoroocta  sulfonate (4:2) Sodium  1 H,1H,2H,2H-perfluoroocta sulfonate (6:2) Sodium  1 H,1H,2H,2H-perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanesulfonic Perfluoroheptanesulfonic Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHBA) Perfluorohexanoic acid Perfluorohexanoic acid Perfluorohexanoic acid Perfluorohexanoic acid Perfluorohexanoic acid Perfluorohexanoic acid								
13C2 PFUNA  1 mL Sodium  1H, 1H, 2H, 2H-perfluorohexa sulfonate (4:2) Sodium  1H, 1H, 2H, 2H-perfluorocta sulfonate (6:2) Sodium  1H, 1H, 2H, 2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutoric acid Perfluorobecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobetanoic acid Perfluoroheptanoic acid (PFBS) Perfluoroheptanesulfonic Perfluoroheptanoic acid (PFHPA) Perfluoroheptanoic acid (PFHPA) Perfluoroheptanoic acid	13C2 PFUNA  1 mL Sodium  1 H.1H, 2H, 2H-perfluorohexa sulfonate (4:2) Sodium  1H,1H,2H,2H-perfluorocta sulfonate (6:2) Sodium  1H,1H,2H,2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutanesulfonic a (PFBS) Perfluorodecanoic acid Perfluorobetanoic acid (PFBS) Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHDA) Perfluorohexanoic acid (PFHDA) Perfluorohexanoic acid (PFHDA) Perfluorohexanoic acid (PFHDA)							13C4 PFOA	
1 mL Sodium  1 H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium  1H,1H,2H,2H-perfluoroocta sulfonate (6:2) Sodium  1H,1H,2H,2H-perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic a (PENS) Perfluorodecanoic acid Perfluoroheptanoic acid (PENS) Perfluoroheptanosulfonic Perfluoroheptanoic acid (PENBA) Perfluoroheptanoic acid (PENBA) Perfluoroheptanosulfonic Perfluorohexanoic acid	1 mL Sodium  1 H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium  1H,1H,2H,2H-perfluoroocta sulfonate (6:2) Sodium  1H,1H,2H,2H-perfluorooctane sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutanesulfonic acid Perfluorobutanesulfonic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorobecanoic acid Perfluorobecanoic acid (PEMS) Perfluoroheptanesulfonic Perfluorohexanoic acid (PEHDA)								
1 mL Sodium 1 H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium 1 H,1H,2H,2H-perfluoroocta sulfonate (6:2) Sodium 1 H,1H,2H,2H-perfluorodeca sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutynic acid Perfluorobutynic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroheptanoic acid Perfluoroheptanoic acid (PFHBA) Perfluoroheptanesulfonic Perfluoroheptanoic acid (PFHBA) Perfluoroheptanesulfonic Perfluorohexanoic acid (PFHBA)	1 mL Sodium 1 H,1H,2H,2H-perfluorohexa sulfonate (4:2) Sodium 1H,1H,2H,2H-perfluoroocta sulfonate (6:2) Sodium 1H,1H,2H,2H-perfluorodeca sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobecanoic acid Perfluorobecanoic acid Perfluoroheptanoic acid Perfluoroheptanoic acid (PFHB) Perfluoroheptanesulfonic Perfluorohexanoic acid (PEHBO) Perfluorohexanoic acid (PFHDO) Perfluorohexanoic acid (PEHBO) Perfluorohexanoic acid (PFHDO)								. 7.
1H. TH, 2H-perfluorohexa sulfonate (4:2) Sodium 1H. TH, 2H-perfluoroocta sulfonate (6:2) Sodium 1H. TH, 2H-perfluorodeca sulfonate (8:2) N-ethyl perfluorooctane sulfonamidoacetic acid N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroheptanoic acid Perfluoroheptanoic acid Perfluoroheptanoic acid (PEHPA) Perfluoroheptanesulfonic Perfluoroheptanoic acid (PEHPA) Perfluoroheptanesulfonic Perfluoroheptanoic acid (PEHPA)	1H. TH, 2H-perfluorohexa sulfonate (4:2) Sodium 1H. TH, 2H-perfluorocta sulfonate (6:2) Sodium 1H. TH, 2H-perfluoroctane sulfonate (8:2) N-ethyl perfluoroctane sulfonamidoacetic acid N-methyl perfluoroctane sulfonamidoacetic acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobutyric acid Perfluorobecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluorodecanoic acid Perfluoroheptanoic acid Perfluoroheptanoic acid (PEHBA) Perfluoroheptanoic acid (PEHBA) Perfluoroheptanoic acid (PEHBA) Perfluoroheptanoic acid (PEHBA) Perfluorohexanoic acid (PEHBA) Perfluorohexanoic acid (PEHBA)					T.CPECSP 00130	- 1	1 - 7 0	- 1
(4:2)  H-perfluoroocta (6:2)  H-perfluorodeca (8:2)  rfluorooctane oacetic acid erfluorooctane oacetic acid utyric acid utyric acid utyric acid utyric acid occetic acid occetic acid occetic acid canoic acid canoic acid ecanoic acid exanoic acid	H-perfluoroocta (6:2) H-perfluorodeca (8:2) rfluorooctane oacetic acid erfluorooctane oacetic acid utyric acid utyric acid utyric acid occetic acid occetic acid occetic acid occetic acid occetic acid optanesulfonic acid ecanoic acid exanoic acid exanoic acid exanoic acid exanoic acid exanoic acid exanoic acid								
H-perfluoroocta (6:2) H-perfluorodeca (8:2) rfluorooctane cacetic acid erfluorooctane oacetic acid utyric acid utyric acid utyric acid utyric acid ocaceic acid canoic acid cenoic acid ecanoic acid eptanesulfonic exanoic acid	H-perfluoroocta (6:2) H-perfluorodeca (8:2) rfluorooctane cacetic acid erfluorooctane odcctic acid utyric acid utyric acid utyric acid utyric acid odccanoic acid canoic acid ecanoic acid exanoic acid							sulfonate (4:2)	
H-perfluoroocta (6:2) H-perfluorodeca (8:2) rfluorooctane oacetic acid erfluorooctane utyric acid utyric acid utyric acid odecanoic acid ecanoic acid ecanoic acid ecanoic acid eptanoic acid	H-perfluoroocta (6:2) H-perfluorodeca (8:2) rfluorooctane oacetic acid erfluorootane oacetic acid utyric acid utyric acid utyric acid ocanoic acid canoic acid ecanoic acid exanoic acid eptanesulfonic exanoic acid exanoic acid exanoic acid exanoic acid							Sodium	4.74 ng/mL
ctane acid octane acid fonic acid acid acid acid acid acid acid ac	ctane acid coctane acid fonic acid acid acid acid acid acid acid ac							1H,1H,2H,2H-perfluorooctane	1
octane acid octane acid cid cid cid acid acid c acid acid acid acid acid acid	octane acid coctane acid cold cold cold cold cold cold cold col							Sodium	0
octane acid folic a acid acid llfonic acid acid acid acid acid acid acid	acid fonic a acid fonic a acid llfonic fonic acid fonic acid fonic acid							1H,1H,2H,2H-perfluorodecane	
acid acid acid fonic a acid llfonic acid acid acid acid acid acid	acid acid acid acid acid acid acid acid							sulfonate (8:2)	
octane acid cid fonic a acid c acid lfonic acid llfonic acid	acid cid fonic a acid cacid lfonic acid llfonic acid fonic a							sulfonamidoacetic acid	A 111 / P 11
acid acid llfonic a c acid bic acid sulfonic c acid sulfonic c acid sulfonic s acid	acid acid lifonic a acid c acid sulfonic c acid sulfonic c acid sulfonic acid							N-methyl perfluorooctane	5 ng/mL
acid  lifonic a  c acid  sulfonic  c acid  c acid  c acid  sulfonic  acid	acid Ilfonic a c acid Sulfonic Ic acid Sulfonic C acid acid Ic acid Ilfonic							7.1	
								acid	
									4.42 ng/mL
									5 ng/mL
								Perfluorododecanoic acid	
									4.82 ng/mL
	m							Perfluoroheptanoic acid	5 ng/mL
	l lat								[
FELTIMOTONEXAMENT									
									JIII / GI C

Job No.: 320-39023-1 Lab Name: TestAmerica Sacramento

			Reagent	nt	Parent Reagent	L		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume		Reagent ID	Volume Added	Analyte	Concentration
							Derflucrononencia (DENA)	Tm/ 2007
						•	40 T	0
							Pertruorononamesurronic acta	4.0 IIG/IIII
						•	~	- 1
							Feriluorooctanesultonic acid	4.64 ng/mL
						•	Perfluorooctane Sulfonamide	5 ng/mL
							Perfluoropentanoic acid	5 ng/mL
						•		
						•		
						•	Dorfluorottidocanoid	
							Perfluoroundecanoic acid	5 ng/mI.
.LCMPFC ALL SU 00041	08/20/18	02/20/18 M	ol, Lot Baker 200	mL LCd3-NM	LCd3-NMeFOSAA 00006	200 uL	d3-NMeFOSAA	- 1
		7	141039		ı			
				LCd5-NE	LCd5-NEtFOSAA 00006		d5-NEtFOSAA	
				ICM2-6:	LCM2-6:FTS_00006	200 uL	M2-6:2FTS	0.0475 ug/mL
				LCM2-8:2FTS	2FTS_00008	200 uL	M2-8:2FTS	0.0479 ug/mL
				LCM2PFE	LCM2PFHxDA_00013	200 uL	13C2-PFHxDA	0.05 ug/mL
				LCM2PFC	LCM2PFOA_00008	200 uL	13C2-PFOA	0.05 ug/mL
				LCM2PFT	LCM2PFTeDA_00012	200 uL	13C2-PFTeDA	0.05 ug/mL
				LCM4PFE	LCM4PFHPA_00012	200 uL	13C4-PFHpA	1m/bn 50.0
				LCM5PFE	LCM5PFPEA_00013	200 uL	13C5-PFPeA	0.05 ug/mL
				LCM8FOS	LCM8FOSA 00016	200 uL	13C8 FOSA	0.05 ug/mL
				LCMPFBA		200 uL	13C4 PFBA	0.05 ug/mL
				LCMPFBS	90000	200 uL	13C3-PFBS	0.0465 ug/mL
				LCMPFDA 00018	00018	200 uL	13C2 PFDA	0.05 ug/mL
				LCMPFDC	LCMPFDoA 00013	200 uL		0.05 ug/mL
				LCMPFHX	LCMPFHxA_00019	200 uL	13C2 PFHxA	0.05 ug/mL
				LCMPFHX		200 uL	1802 PFHxS	0.0473 ug/mL
				LCMPFNA	00013	200 uL	13C5 PFNA	0.05 ug/mL
				LCMPFOA	00017	200 uL	13C4 PFOA	0.05 ug/mL
				LCMPFOS	00025	200 uL	13C4 PFOS	0.0478 ug/mL
				LCMPFUC	LCMPFUdA_00014	200 uL	13C2 PFUnA	0.05 ug/mL
LCd3-NMeFOSAA 00006	05/19/22	WELL	Lot d3NMeF(		- 1	nt)	d3-NMeFOSAA	
LCd5-NEtFOSAA_00006	08	WELL	WELLINGTON, Lot d5NEtFOSAA1117	(1	- 1	nt)	d5-NEtFOSAA	50 ug/mL
LCM2-6:FTS_00006	02/11/22	WEL	WELLINGTON, Lot M262FTS0217	(1	(Purchased Reagent)	nt)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS_00008	07/05/22	WEL	( V I		- 1	nt)	M2-8:2FTS	
LCM2PFHxDA_00013	07/13/22	Wellington	Wellington Laboratories, Lot M2PFHxDA071	7	(Purchased Reagent)	nt)	13C2-PFHxDA	50 ug/mL
LCM2PFOA_00008	02/12/21	Wellingto	, Lot			nt)	13C2-PFOA	50 ug/mL
.LCM2PFTeDA_00012	11/30/22	Wellington	Wellington Laboratories, Lot M2PFTeDA111	17		nt)	13C2-PFTeDA	Tw/6n 05
LCM4PFHPA 00012	05/03/22	Wellingtor	Wellington Laboratories, Lot M4PFHpA051	7	(Purchased Reagent	nt)	13C4-PFHpA	20 ng/mT
LCMSPFPEA 00013	07/20/22	Wellingtor	Wellington Laboratories, Lot M5PFPeA071	7	(Purchased Reagent)	nt)	13C5-PFPeA	20 ng/mT
LCM8FOSA 00016	10/11/22	Wellingtor	Wellington Laboratories, Lot M8FOSA1017I		(Purchased Reagent)	nt)	13C8 FOSA	20 ng/mT
LCMPFBA 00013	04/12/22	Wellingto	Wellington Laboratories, Lot MPFBA0417	7	(Purchased Reagent)	nt)	13C4 PFBA	50 ug/mL
LCMPFBS 00006	05/24/22	Wellingto			(Purchased Reagent	nt)	13C3-PFBS	46.5 ug/mL
LCMPFDA 00018	07/13/22	Wellingto	Wellington Laboratories, Lot MPFDA0717	(I	(Purchased Reagent	nt)	13C2 PFDA	50 ug/mL
LCMPFDoA 00013	05/23/22	Wellingto	Wellington Laboratories, Lot MPFDoA051	7		nt)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00019	10/27/22	Wellingto	Lot	7		nt)		
TCMDEH+S 00013	00/11/00	MOTE TAGE	+	. [	- 1	n+)		
上 これなり こうじょう	11/1/10	VOL14410V	2			110,		7

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

				ф ф	Parent Reagent	ıt		
	Ежр	Prep	Dilutant	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCMPFNA_00013	09/30/21	Wellington	n Laboratories, Lot	MPFNA0916	(Purchased Reagent)	ent)	13C5 PFNA	50 ug/mL
LCMPFOA_00017	10/17/22	Wellingto.	Wellington Laboratories, Lot MPFOA1017	MPFOA1017		ent)	13C4 PFOA	50 ug/mL
LCMPFOS_00025	10/17/22	Wellingto.	Wellington Laboratories, Lot MPFOS101	MPFOS1017	(Purchased Reagent)	ent)	13C4 PFOS	47.8 ug/mL
LCMPFUdA_00014	11/22/21	Wellingtor	کِ	MPFUdA1116	(Purchased Reagent)	ent)	13C2 PFUnA	50 ug/mL
.LCPFCSP_00132	08/20/18	02/20/18 Me	02/20/18   Methanol, Lot 090285	10000 nE	LC4:2FTS_00003	200 uL	Sodium	0.934 ug/mL
							1H, 1H, 2H, 2H-perfluorohexane	
				1	T.C6:2FTS 00003	200 11T.	- 1	0.948 110/mT,
							1H,1H,2H,2H-perfluorooctane	)
					LC8:2FTS 00003	200 uL	Sodium	0.958 ug/mL
					I		1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
					LCN-EtFOSAA_00004	200 uL	N-ethyl perfluorooctane	1 ug/mL
					LCN-MeFOSAA_00005	200 uL		1 ug/mL
					LCPFBA 00007	200 uL	Perfluorobutyric acid	1 ug/mL
						200 uL	Perfluorobutanesulfonic acid (PFBS)	
					LCPFDA_00008	200 uL	Perfluorodecanoic acid	1 ug/mL
				-		ηŢ		1 ug/mL
					LCPFDSA_00002	200 uL	Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00008	200 uL	Perfluoroheptanoic acid (PFHpA)	1 ug/mL
					LCPFHpSA 00003	ηΓ	Perfluoroheptanesulfonic acid	0.952 ug/mL
					LCPFHxA_00007	ηľ		
					LCPFHxS-br_00004	200 uL	Perfluorohexanesulfonic acid (PFHxS)	0.91 ug/mL
					LCPFNA_00009	200 uL	Perfluorononanoic acid (PFNA)	1 ug/mL
							fonic	0.96 ug/mL
					LCPFOA 00009			$\vdash$
					LCPFOS-br_00004	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
						200 uL	$\overline{}$	1 ug/mL
					LCPFPeA 00007		Perfluoropentanoic acid	$\vdash$
					ICPFPes 00003	- 1	_	
					ICFFIEDA UUUUS		Perliuoroteriadecanore acra	
					ICFFILDA OUGUS	3 5		1 ug/mL
LC4:2FTS_00003	12/12/21	WEI	WELLINGTON, Lot 42FTS12	16	1		Sodium	
							1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
LC6:2FTS_00003	06/25/21	WEI	WELLINGTON, Lot 62FTS0	rs0616	(Purchased Reagent)	ent)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00003	08/22/21	WEI	WELLINGTON, Lot 82FTS0	180816	(Purchased Reagent)	ent)	Sodium 1H,1H,2H,2H-perfluorodecane	47.9 ug/mL
							sulfonate (8:2)	

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

				Reagent	Parent Reagent			
	E XX	Pren	Dilutant	ביית.		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCN-EtFOSAA_00004	09/30/21	MELLI	WELLINGTON, LOT NETFOSAA091	916	(Purchased Reagent)		N-ethyl perfluorooctane	20 ng/mI
.LCN-MeFOSAA_00005	10/12/21	WELLI	WELLINGTON, Lot NMeFOSAA0916	916	(Purchased Reagent)		N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA 00007	05/27/21	Wellington	Laboratories, Lot	PFBA0516	(Purchased Reagent)		Perfluorobutyric acid	50 ug/mL
LCPFBS_00008	03/15/21	Wellingtor	Laboratories, Lot	LPFBS0316	(Purchased Reagent)		Perfluorobutanesulfonic acid (PEBS)	44.2 ug/mL
CPFDA 00008	05/29/22		Wellington Laboratories, Lot	PFDA0517	(Purchased Reagent)		Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22			Lot PFDoA0517			Perfluorododecanoic acid	50 ug/mL
LCPFDSA 00002	05/24/21	Wellingtor	1	Lot LPFDS0516	(Purchased Reagent)		Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00008	12/02/21	Wellingtor	1	Lot PFHpA1216			Perfluoroheptanoic acid (PEHbA)	50 ug/mL
CPFHpSA 00003	09/01/22		Wellington Laboratories, Lot LPFHpS0817	PFHpS0817	(Purchased Reagent)		Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHXA 00007	12/22/20		Wellington Laboratories, Lot PFHxA1215	FHxA1215	(Purchased Reagent)		Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00004	07/03/20	1	Wellington Laboratories, Lot brPFHxSK061	PFHxSK0615	(Purchased Reagent)		Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA 00009	07/20/22	Wellingto	Wellington Laboratories, Lot	Lot PFNA0717	(Purchased Reagent)		Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS_00003	09/27/22	Wellingtor	Wellington Laboratories, Lot L	Lot LPFNS0917	(Purchased Reagent)		Perfluorononanesulfonic acid	48 ug/mL
.LCPFOA_00009	09/27/22	Wellingto		Lot PFOA0917	(Purchased Reagent)		Perfluorooctanoic acid (PFOA)	50 ug/mL
LCPFOS-br_00004	10/14/20	Wellington	Wellington Laboratories, Lot br	t brPFOSK1015	(Purchased Reagent)		Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
.LCPFOSA 00010	09/30/21	Wellingtor	Wellington Laboratories, Lot F	Lot FOSA0916I	(Purchased Reagent)		Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA 00007	05/31/21	Wellingtor		Lot PFPeA0516	(Purchased Reagent)		Perfluoropentanoic acid	50 ug/mL
.LCPFPes_00003	01/11/22	Wellington		Lot LPFPeS0117			Perfluoropentanesulfonic acid	46.9 ug/mL
.LCPFTeDA_00006		Wellington	Lot	Lot PFTeDA1215		_	Perfluorotetradecanoic acid	50 ug/mL
.LCPFTrDA_00006	02/12/21	Wellington	Lot	PFTrDA0216			Perfluorotridecanoic acid	50 ug/mL
LCPFUdA_00007	10/18/21	Wellingtor	Wellington Laboratories, Lot P	Lot PFUdA1016	(Purchased Reagent)		Perfluoroundecanoic acid	50 ug/mL
LCPFC LL6 00006	11/18/18	06/05/18 Me	MeOH/H2O, Lot 090285	200 mL L	LCMPFC ALL SU 00075	10 mL	d3-NMeFOSAA	2.5 ng/mL
I I						1	d5-NEtFOSAA	2.5 ng/mL
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	2.5 ng/mL
							13C8 FOSA	2.5 ng/mL
							13C4 PFBA	2.5 ng/mL
							13C3-PFBS	2.325 ng/mL
							13C2 PFDA	2.5 ng/mL
							13C2 PFDoA	2.5 ng/mL
							13C2 PFHxA	2.5 ng/mL
						1	1802 PFHxS	2.365 ng/mL
							13C5 PFNA	2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C4 PFOS	2.39 ng/mL
							1 1 0 0 0 0 0	

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

Sepagent D   Sarge   Discost   Total   Discost   Disco						Parent Reagent	1)		
Part 10   Date		( ( (	Ω (λ		Keagent		Omit [ 071		
11		Date	Date	Used	Volume		Added	Analyte	Concentration
### Software   18.34 # 24 perfluoroctaine   4.79     18.34 # 24 perfluoroctaine   5.30 # 24 perfluor						LCPFCSP_00148		Sodium 1H,1H,2H,2H-perfluorohexane	4.67 ng/mL
11,14,14,14  per l'ordecane   4.79     3,041un								Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	4.74 ng/mL
Subtraction of the control of the								Sodium 1H,1H,2H,2H-perfluorodecane	4.79 ng/mL
Sulf-One-octative   Sulf								sulfonate (8:2) N-ethyl perfluorooctane	5 ng/mL
Perfluorobtamentation and a continuous perfluorobtament								N-methyl perfluorooctane sulfonamidoacetic acid	1m/gu 5
Perfluorocodesanoic acid   4-42									5 ng/mL
SU_00075   12/05/18   06/05/18   Methanol, Lot Baker   200 mL Locd3-NeeFoSAA_00008   200 mL L3C2-PEPFRAN   0.005 mL L3C2-PEP								fonic	
Perfilocodecane Sulfond acid 4 82								Perfluorododecanoic acid	
PerfluorObeptanol acid   200									
Perflucrohexanolic acid   4.76								Perfluoroheptanoic acid (PFHpA)	5 ng/mL
Perfluctobexanosur caid   4.55									
Perfluorobekanesulfonic acid (PRNA)   Perfluorobekanesulfonic acid (PRNA)   Perfluorobeanolic acid (PRNA)   Perfluorobeanolic acid (PRNA)   5.005								Perfluorohexanoic acid	
Perfilosoconanoic acid (PPNA)   5.005									
Perfluorocctanoic acid (PEOA) 5.00									5 ng/mL
Perflucrocotanesulfonic acid   4.06								Perfluorooctanoic acid (PFOA)	5.005 ng/mL
Perflucroctanesulfonic acid   4.64								Perfluorononanesulfonic acid	4.8 ng/mL
Perfluoroctane Sulfonamide   Suffunce								Perfluorooctanesulfonic acid (PFOS)	4.64 ng/mL
Perfluoropentanoic acid   5								Perfluorooctane Sulfonamide	
Perfluoropentanesulfonic acid   4.69								Perfluoropentanoic acid	5 ng/mL
Sulface   Sulf								Perfluoropentanesulfonic acid	4.69 ng/mL
Su_00075   12/05/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA   00008   200 uL   d3-NMeFOSAA   0.05     LCd5-NEtFOSAA   00008   200 uL   d5-NEtFOSAA   0.05     LCM2-6:FTS   00008   200 uL   M2-6:2FTS   0.0475     LCM2-8:2FTS   00010   200 uL   M2-6:2FTS   0.05     LCM2-B:2FTS   00010   200 uL   M2-6:2FTS   0.05     LCM2-FTADA   00016   200 uL   M2-6:2FTS   0.05     LCM2PFTADA   00014   200 uL   M2-6:2FTADA   0.05     LCM2PFTADA   00014   200 uL   M3C2-PFTADA   0.05     LCM3PFTADA   00014   200 uL   M3C2-PFTADA   0.05     LCM3PFTADA   00015   200 uL   M3C3-PFTADA   0.05     LCM3PFTADA   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   00015   0								Perfluorotridecanoic acid	
12/05/18   06/05/18   Methanol, Lot Baker   200 mL   LCd3-NMeFOSAA   000 0 LL   d3-NMeFOSAA   0.05     141039								Perfluoroundecanoic acid	
00008         200 uL         d5-NEtFOSAA         0.05           008         200 uL         M2-6:2FTS         0.0475           0010         200 uL         M2-8:2FTS         0.0479           016         200 uL         13C2-PFHXDA         0.05           014         200 uL         13C2-PFTEDA         0.05           14         200 uL         13C4-PFHPA         0.05           15         200 uL         13C5-PFPEA         0.05           9         200 uL         13C8-PFPEA         0.05	su_0007	12/05/18		Lot	200 mL	LCd3-NMeFOSAA_00008		d3-NMeFOSAA	Ŋ
008         200 uL         M2-6:2FTS         0.0475           0010         200 uL         M2-8:2FTS         0.0479           016         200 uL         13C2-PFHXDA         0.05           014         200 uL         13C2-PFTGA         0.05           014         200 uL         13C2-PFTGA         0.05           015         200 uL         13C5-PFPGA         0.05           01         000 uL         0.05           02         000 uL         0.05           03         000 uL         0.05           04         0.05         0.05						LCd5-NEtFOSAA_00008		d5-NEtFOSAA	0.05 ug/mL
0010 200 uL M2-8:2FTS 0.0479 016 200 uL 13C2-PFHXDA 0.05 0.05 0.05 0.01 13C2-PFOA 0.05 0.05 0.01 13C2-PFPADA 0.05 0.05 0.01 13C3-PFPADA 0.05 0.05 0.01 13C3-PFPADA 0.05 0.05 0.00 uL 13C3-PFPADA 0.05 0.05 0.00 uL 13C3-PFPADA 0.05 0.05 0.07 0.08 0.09 0.09 0.09 0.09						LCM2-6:FTS_00008		M2-6:2FTS	0.0475 ug/mL
116 200 ul 13C2-PFHXDA  3 200 ul 13C2-PFGA  114 200 ul 13C3-PFFGA  15 200 ul 13C4-PFPGA  16 200 ul 13C5-PFPGA  17 200 ul 13C5-PFPGA  18 200 ul 13C8 FOSA  19 200 ul 13C3-PFPGA  10 0055						LCM2-8:2FTS 00010		M2-8:2FTS	
114 200 ul 13C2-PFPGA 0.05 114 200 ul 13C2-PFPGA 0.05 15 200 ul 13C5-PFPGA 0.05 9 200 ul 13C8 FOSA 0.05 200 ul 13C3 PFBA 0.05 200 ul 13C3 PFBA 0.05 200 ul 13C3 PFBA 0.05						LCM2PFHxDA 00016		13C2-PFHxDA	
14     200 uL     13C4-PFHpA     0.05       15     200 uL     13C5-PFPeA     0.05       9     200 uL     13C8 FOSA     0.05       200 uL     13C4 PFBA     0.05       200 uL     13C4 PFBA     0.05						T.CM2 PFTeDA 00014		1302-FF0A 1302-PFTeDA	0.05 ug/mL
15 200 uL 13C5-PFPEA 0.05 200 uL 13C8 FOSA 0.05 200 uL 13C4 PFBA 0.05						LCM4PFHPA 00014		13C4-PFHpA	0.05 ug/mL
9 200 uL 13C8 FOSA 0.05 200 uL 13C4 PFBA 0.05						LCM5PFPEA_00015		13C5-PFPeA	0.05 ug/mL
200 ul 13C4 PFBA 0.05						LCM8FOSA 00019	- 1	13C8 FOSA	0.05 ug/mL
						LCMPFBA 00015	200 uL	13C4 PFBA	1m/bn c0.0

Lab Name: TestAmerica Sacramento

SDG No.:

			+ c 0 0 0 0	+	Parent Reagent			
	Exp	Prep	nt	al		Volume	r	-
Reagent 1D	Date	Date	Used		αI	Added	- 1	Concentration
				김	LCMPFDA_00020	200 uL	- 1	0.05 ug/mL
				IC	LCMPFDoA_00015	200 uL	13C2 PFDoA	0.05 ug/mL
				IC	LCMPFHxA 00022	200 uL	13C2 PFHxA	0.05 ug/mL
				IC	LCMPFHxS 00015	200 uL	1802 PFHxS	0.0473 ug/mL
				LC	LCMPFNA 00015	200 uL	13C5 PFNA	0.05 ug/mL
				LC	LCMPFOA 00019	200 uL	13C4 PFOA	0.05 ug/mL
				LC	LCMPFOS 00027	200 uL	13C4 PFOS	0.0478 ug/mL
				LC	LCMPFUdA 00017	200 uL	13C2 PFUnA	0.05 ug/mL
LCd3-NMeFOSAA_00008	11/08/22	WELLI	WELLINGTON, Lot d3NMeFOSAA1117		(Purchased Reagent)	nt)	d3-NMeFOSAA	20 ng/mr
LCd5-NEtFOSAA_00008	11/08/22	WELLI	WELLINGTON, Lot d5NEtFOSAA1117		(Purchased Reagent)	nt)	d5-NEtFOSAA	20 ng/mT
LCM2-6:FTS 00008	02/16/23	WEL	WELLINGTON, Lot M262FTS0218		(Purchased Reagent)	nt)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00010	01/24/23	WET	WELLINGTON, Lot M282FTS0118			nt)	M2-8:2FTS	
LCM2PFHxDA 00016	07/13/22	Wellington	Wellington Laboratories, Lot M2PFHxDA071	1717	1	nt)	13C2-PFHxDA	
LCM2PFOA 00008	02/12/21	Wellington	Wellington Laboratories, Lot M2PFOA0216	116		nt)	13C2-PFOA	
LCM2PFTeDA 00014	11/30/22	Wellington	Wellington Laboratories, Lot M2PFTeDA111	117		nt)	13C2-PFTeDA	
LCM4PFHPA 00014	05/03/22	Wellington	Laboratories, Lot M4PFHpA0517	517	(Purchased Reagent)	nt)	13C4-PFHpA	50 ug/mL
LCM5PFPEA 00015	07/20/22	Wellington	Wellington Laboratories, Lot M5PFPeA071	717	(Purchased Reagent)	nt)	13C5-PFPeA	20 ng/mr
LCM8FOSA 00019	10/11/22	Wellington	Wellington Laboratories, Lot M8FOSA101	17I	(Purchased Reagent)	nt)	13C8 FOSA	20 ng/mr
LCMPFBA 00015	02/16/23	Wellingto	Wellington Laboratories, Lot MPFBA0218	18	(Purchased Reagent)	nt)	13C4 PFBA	50 ug/mL
LCMPFBS 00008	02/15/23	Wellingto	Wellington Laboratories, Lot M3PFBS0218	118	(Purchased Reagent)	nt)	13C3-PFBS	46.5 ug/mL
LCMPFDA 00020	02/16/23	Wellingto	Wellington Laboratories, Lot MPFDA0218	18	(Purchased Reagent)	nt)		50 ug/mL
LCMPFDOA 00015	02/16/23	Wellingto	Wellington Laboratories, Lot MPFDoA02	118		nt)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00022	10/27/22	Wellington	Laboratories, Lot	117	(Purchased Reagent)	nt)	13C2 PFHxA	20 ng/mr
LCMPFHxS 00015	03/22/23	Wellingto	Wellington Laboratories, Lot MPFHxS0318	118	(Purchased Reagent)	nt)	1802 PFHxS	47.3 ug/mL
LCMPFNA 00015	12/14/22	Wellingto	Wellington Laboratories, Lot MPFNA121	17	(Purchased Reagent)	nt)	13C5 PFNA	50 ug/mL
LCMPFOA_00019	05/04/23	Wellingto	Wellington Laboratories, Lot MPFOA041	18	(Purchased Reagent)	nt)	13C4 PFOA	20 ng/mr
LCMPFOS_00027	02/15/23	Wellingto	Wellington Laboratories, Lot MPFOS0218	18		nt)	13C4 PFOS	47.8 ug/mL
LCMPFUdA 00017	11/22/21	Wellingto	Wellington Laboratories, Lot MPFUdA1116	16	(Purchased Reagent)	nt)	13C2 PFUnA	50 ug/mL
.LCPFCSP 00148	11/18/18	05/17/18 Me	05/17/18   Methanol, Lot 090285   10	10 mL LC4	:2FTS 00005	100 uL	Sodium	0.467 ug/mL
I					I		1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
				D I	LC6:2FTS_00007	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.474 ug/mL
				IC8	8:2FTS_00007	100 uL	Sodium	0.479 ug/mL
							1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
				J.	LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.5 ug/mL
				LC	LCbr-NMeFOSAA_00001	100 uL		0.5 ug/mL
				IC	LCPFBA 00008	100 uL	1 173	0.5 ug/mL
				IC	LCPFBS_00009	1	Perfluorobutanesulfonic acid	0.442 ug/mL
				L C	LCPFDA 00008	100 uL	(FFBS) Perfluorodecanoic acid	0.5 ug/mL
							Perfluorododecanoic acid	0.5 ug/mL
				LC	LCPFDS 00008		Perfluorodecane Sulfonic acid	0.482 ug/mL
				IC	LCPFHpA_00011	100 uL	Perfluoroheptanoic acid	0.5 ug/mL
	_	_		_			(PrhpA)	_

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				Reagent	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used V	Final	Reagent ID	Volume Added	Analyte	Concentration
					LCPFHpSA 00003	100 uL	Perfluoroheptanesulfonic acid	0.476 ug/mL
					LCPFHxA_00010	100 uL	Perfluorohexanoic acid	0.5 ug/mL
				1	LCPFHxS-br_00006	100 uL	Perfluorohexanesulfonic acid (PFHxS)	0.455 ug/mL
				1	LCPFNA 00010	100 uL	Perfluorononanoic acid (PFNA)	0.5 ug/mL
					I		acid	
					LCPFNS_00003	100 uL	Perfluorononanesulfonic acid	0.48 ug/mL
					LCPF0A_00011	100 uL	Perfluorooctanoic acid (PFOA)	0.5005 ug/mL
					LCPFOS-br_00007	100 uL	Perfluorooctanesulfonic acid (PFOS)	0.464 ug/mL
				1	LCPFOSA 00013	100 uL	Perfluorooctane Sulfonamide	0.5 ug/mL
					LCPFFeA_00008		Perfluoropentanoic acid	0.5 ug/mL
					LCPFPes 00003	100 uL	Perfluoropentanesulfonic acid	0.469 ug/mL
					LCPFTeDA 00008	100 uL	Perfluorotetradecanoic acid	0.5 ug/mL
					LCPFTrDA 00008		Perfluorotridecanoic acid	
	1					100 uL	Perfluoroundecanoic acid	0.5
LC4:2FTS_00005	12/12/21	WE	Lot		(Purchased Reagent)	( <del>,</del>	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	46.7 ug/mL
LC6:2FTS_00007	04/20/22	ME.	Lot		(Purchased Reagent)	t)	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00007	12/12/21	ME	WELLINGTON, Lot 82FTS1216		(Purchased Reagent)	t)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCbr-NEtFOSAA_00001	01/17/23	WELLI	Lot brNEtF	œ.	(Purchased Reagent)	t)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCbr-NMeFOSAA_00001	01/17/23	WELLI	WELLINGTON, Lot brNMeFOSAA0118	m.	(Purchased Reagent)	t)	N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
LCPFBA_00008	05/29/22	Wellingto	Wellington Laboratories, Lot PFBA051	.0517	(Purchased Reagent)	t)	Perfluorobutyric acid	50 ug/mL
LCPFBS_00009	09/21/22		Wellington Laboratories, Lot LPFBS0917	30917	(Purchased Reagent)	t)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	05/29/22			0517	(Purchased Reagent)	t)	Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22		Laboratories, Lot	40517	I	t)	Perfluorododecanoic acid	20 ng/mT
LCPFDS 00008	11/08/22		Laboratories, Lot	51117	- 1	t)	Perfluorodecane Sulfonic acid	- 1
LCPFHpA_00011	09/27/22	Wellington	on Laboratories, Lot PFHpA0917	40917	(Purchased Reagent)	t)	Perfluoroheptanoic acid (PFHpA)	20 ng/mr
LCPFHpsA 00003	09/01/22	Wellingtor	Wellington Laboratories, Lot LPFHpS0817	S0817	(Purchased Reagent)	t)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellington	Ι,	40917	(Purchased Reagent)	t)	Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00006	01/04/22	Wellington	Wellington Laboratories, Lot brPFHxSK011	SK0117	(Purchased Reagent)	t)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA_00010	07/20/22	Wellingto	Wellington Laboratories, Lot PFNA071	.0717	(Purchased Reagent)	t)	acid	
TOPENS OCCUS	00/22/22	Mo 1 1 : 1	Wellington Laboratories Lot LDENS001	7 1001	(Posed Respect)	+	Pertluorooctanoic acid (PFOA)	0.05 ug/mL
. T.CPFOA 00011	09/27/22	Wellingto	101	0917		± (-)		
LCPFOS-br_00007	01/12/22	Wellington	Lot bi	3K0117	1	t)	Lfonic	
LCPFOSA 00013	09/01/22	Wellington	on Laboratories, Lot FOSA0817I	)817I	(Purchased Reagent)	t)	Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA_00008	06/14/22	Wellingto	Laboratories,	40617	(Purchased Reagent)	t)	Perfluoropentanoic acid	50 ug/mL

Lab Name: TestAmerica Sacramento

SDG No.:

				4	Parent Reagent	ıt		
Readent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Readent ID	Volume	Analvte	Concentration
	01/11/00	Mo to the transfer of the tra	+01 00:x0+cx04c1	T DEDOC 0117	10	+ + + + + + + + + + + + + + + + + + + +	Dowfluoronantanesulfonia	16 9 11 mT
- TOTE CO 0000	01/11/20	Wellington	1 1	TELECOLE.	(Furchased neage	ciic)	Territopenicanesarionito acta	Tim / Su 0:01
1. TOPET 1 TOP	09/30/21	Wellington Wollington	Weilington Laboratories, Lot Fri	PFIEDAUSIS	(Fulcilased Reagelic)	enc)	Porfliorotridograpia agid	JM / gu 06
1. LCFF 11 LA 00008	10/10/21	METTINGCOIL	101	PETTAN 1016	(Furchased head	ent)	Porfluoroundoganoi a acid	JM / gr. 05
	-11	METTING COI	ا   د	1	(Furchased Reagent,	~ I I	Ferrinolouidecanoic actd	3
LCPFC_LL7_00004	08/20/18	02/22/18 Me	02/22/18   MeOH/H2O, Lot 090285	200 mL L	LCMPFC_ALL_SU_00041	10 mL	d3-NMeFOSAA	2.5 ng/mL
							d5-NetFosaa	2.5 ng/mL
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFOA	
							13C2-PFTeDA	
							13C4-PFHpA	2.5 ng/mL
							13C5-PFPeA	
							13C4 PFBA	
								2.325 ng/mL
								2.5 ng/mL
							13C2 PFHxA	2.5 ng/mL
							1802 PFHxS	2.365 ng/mL
							13C5 PFNA	2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C4 PFOS	2.39 ng/mL
							13C2 PFUnA	- 1
					LCPFCSP_00132	2 mL	Sodium	9.34 ng/mL
							1H,1H,2H,2H-perfluorohexane	
							7	Tm/ 20 0 0
							14,14,24,2H-perfluorooctane	7.40 IIG/IIIL
							Sodium	9.58 ng/mL
							1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	
							N-ethyl perfluorooctane sulfonamidoacetic acid	10 ng/mL
							N-methyl perfluorooctane	10 ng/mL
							Perfluorobutyric acid	10 ng/mL
							Perfluorobutanesulfonic acid	8.84 ng/mL
							(PFBS)	
							Periluorodecanoic acid	
								2 5
							Perillorobecane Sullonic acid	10 ng/mL
							Perfluoroheptanesulfonic acid	9.52 ng/mL
							Perfluorohexanolc acid	10 ng/mL
							Perfluorohexanesulfonic acid (PFHxS)	9.1 ng/mL
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					4 + 3 × 0 D	+		
			R	Reagent	ratenic Neagenic	1.		
Reagent ID	EXP	Prep	Dilutant I	Final	Reagen+	Volume	ond otto	Concentration
	במר	ממ		VOT CITIES	- 1	ממפת	ָ טָ	CONCENTRACTON
							Perfluorononanesulfonic acid	9.6 ng/mL
							Perfluorooctanoic acid (PFOA)	10 ng/mL
							Perfluorooctanesulfonic acid	9.28 ng/mL
							(PFOS)	10 ng/mT
							Ferrance sarronal	- 1
							Feriluoropentanoic acid	
							Perfluoropentanesulfonic acid	
							Perfluorotetradecanoic acid	10 ng/mL
							Perfluorotridecanoic acid	10 ng/mL
							Perfluoroundecanoic acid	10 ng/mL
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker	200 mL	LCd3-NMeFOSAA_00006	200 uL	d3-NMeFOSAA	Tm/bn 50.0
			J		T.C.G.S-NETFOSAA 00006	200 11T.	O.S.—NET FORBA	0.05 11g/mT,
					LCM2-6:FTS 00006		+	
							_	
					LCM2PFHxDA 00013		_	
				•	LCM2PFOA 00008	200 uL	-	
					LCM2PFTeDA 00012	200 uL	13C2-PFTeDA	0.05 ug/mL
					LCM4PFHPA 00012	200 uL	13C4-PFHpA	0.05 ug/mL
					LCM5PFPEA 00013		-	
					LCM8FOSA 00016	200 uL	-	
				•	LCMPFBA 00013		13C4	
					LCMPFBS 00006	200 uL	13C3-PFBS	0.0465 ug/mL
					LCMPFDA 00018	200 uL	13C2 PFDA	
					LCMPFDoA 00013	200 uL	13C2	0.05 ug/mL
				•	LCMPFHxA_00019	200 uL	13C2 PFHxA	0.05 ug/mL
				•		200 uL	1802	0.0473 ug/mL
						200 uL	13C5	0.05 ug/mL
					LCMPFOA_00017	200 uL	13C4	0.05 ug/mL
					LCMPFOS_00025	200 uL	13C4	0.0478 ug/mL
						200 uL	-	0.05 ug/mL
LCd3-NMeFOSAA 00006	05/19/22	WE.	WELLINGTON, Lot d3NMeFOSAA0517	7	- 1	ent)	d3-NMeFOSAA	
LCd5-NEtFOSAA 00006			WELLINGTON, Lot d5NEtFOSAA1117	7	- 1	ent)	d5-NEtFOSAA	
LCM2-6:FTS_00006	02/11/22		WELLINGTON, Lot M262FTS0217		(Purchased Reagent)	ent)	M2-6:2FTS	47.5 ug/mL
LCM2-8:2FTS 00008	07/05/22		F .		- 1	ent)	M2-8:2FTS	- 1
LCM2PFHxDA_00013	07/13/22	$\dashv$	Wellington Laboratories, Lot M2PFHxDA071	:DA0717	(Purchased Reagent	ent)	13C2-PFHxDA	20 ng/mL
LCM2PFOA_00008	02/12/21		Loi	A0216	- 1	ent)	13C2-PFOA	
LCM2PFTeDA_00012	11/30/22	_	Wellington Laboratories, Lot M2PFTeDA111	DA1117	(Purchased Reagent)	ent)	13C2-PFTeDA	50 ug/mL
LCM4PFHPA_00012	05/03/22		Wellington Laboratories, Lot M4PFHpA051	pA0517	(Purchased Reagent	ent)	13C4-PFHpA	50 ug/mL
LCM5PFPEA_00013	07/20/22		Wellington Laboratories, Lot M5PFPeA071	SA0717	(Purchased Reagent)	ent)	13C5-PFPeA	20 ng/mL
LCM8FOSA_00016	10/11/22		Wellington Laboratories, Lot M8FOSA1017I	A1017I	(Purchased Reagent)	ent)	13C8 FOSA	20 ng/mL
LCMPFBA_00013	04/12/22		Wellington Laboratories, Lot MPFBA041	40417	(Purchased Reagent)	ent)	13C4 PFBA	20 ng/mL
LCMPFBS_00006	05/24/22		Wellington Laboratories, Lot M3PFBS081	380815	(Purchased Reagent)	ent)		46.5 ug/mL
LCMPFDA_00018	07/13/22		Wellington Laboratories, Lot MPFDA071	40717	(Purchased Reagent)	ent)	13C2 PFDA	50 ug/mL
LCMPFDoA 00013	05/23/22		Wellington Laboratories, Lot MPFDoA051	A0517		ent)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00019	10/27/22	Wellington	jton Laboratories, Lot MPFHxA101	:A1017	(Purchased Reagent)	ent)	13C2 PFHxA	20 ng/mF
LCMPFHxS_00013	02/11/22		Wellington Laboratories, Lot MPFHxS021	:S0217	(Purchased Reagent)	ent)	1802 PFHxS	47.3 ug/mL

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SDG No.:

				д 0 0	Parent Reagent	<u>+</u>		
	EXP	Prep	Dilutant	Final	1	Volume	(	
Reagent ID	Date	Date		Volume	- 1	Added	- 1	Concentration
.LCMPFNA_00013	09/30/21	Welling	Lot	MPFNA0916		ent)		20 ng/mT
LCMPFOA_00017	10/17/22	Welling		ot MPFOA1017	(Purchased Reagent)	ent)	13C4 PFOA	20 ng/mF
LCMPFOS 00025	10/17/22	Welling	Wellington Laboratories, Lot MP	Lot MPFOS1017	(Purchased Reagent)	ent)	13C4 PFOS	47.8 ug/mL
LCMPFUdA 00014	11/22/21	Wellingt	Wellington Laboratories, Lot MPF	Lot MPFUdA1116	7	ent)	13C2 PFUnA	20 ng/mT
.LCPFCSP 00132	08/20/18	02/20/18	02/20/18   Methanol, Lot 090285	10000 uL	LC4:2FTS 00003	200 uL	Sodium	0.934 ug/mL
I					I		$\sim$	
					0		Sullonare (4:2)	
					TC0:77.T.Z 00003	70 OOZ	Sogium 1H,1H,2H,2H-perfluorooctane	0.948 ug/mL
					_		sulfonate (6:2)	
					LC8:2FTS_00003	200 uL	Sodium	0.958 ug/mL
							<pre>1H,1H,2H,2H-perfluorodecane sulfonate (8:2)</pre>	
					LCN-EtFOSAA_00004	200 uL	N-ethyl perfluorooctane	1 ug/mL
				•	FOOOD KKSOFCM-NOF	- 1	N_moth; nerf];;	
					LCN-Merosaa_00003	700 AT	N-metnyi periluorooctane sulfonamidoacetic acid	TW/6n T
						200 uL	Perfluorobutyric acid	1 ug/mL
					TCPFBS_00008	200 uL	Perfluorobutanesulfonic acid (PFBS)	0.884 ug/mL
					LCPFDA 00008	200 uL	Perfluorodecanoic acid	1 ug/mL
					LCPFDOA 00008	200 uL	Perfluorododecanoic acid	1 ug/mL
				•	LCPFDSA 00002		Perfluorodecane Sulfonic acid	0.964 ug/mL
					LCPFHpA_00008	200 uL	Perfluoroheptanoic acid	1 ug/mL
				•	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
							Periluoroneptanesulionic acid	
				,	LCPFHxA_00007			-
					LCPFHxS-br_00004	200 uL	Perfluorohexanesulfonic acid (PFHxS)	0.91 ug/mL
					LCPFNA_00009	200 uL	Perfluorononanoic acid (PFNA)	1 ug/mL
					LCPFNS_00003	200 uL	Perfluorononanesulfonic acid	0.96 ug/mL
					LCPFOA 00009	- 1		ᆈ
					LCPFOS-br_00004	200 uL	Perfluorooctanesulfonic acid (PFOS)	0.928 ug/mL
					LCPFOSA_00010	200 uL	Perfluorooctane Sulfonamide	1 ug/mL
					LCPFPeA_00007	200 uL	Perfluoropentanoic acid	1 ug/mL
					LCPFPes 00003		Perfluoropentanesulfonic acid	0.938 ug/mL
							Perfluorotetradecanoic acid	1 ug/mL
					LCPFTrDA 00006	- 1	Perfluorotridecanoic acid	1 ug/mL
					LCPFUdA_00007	200 uL	Perfluoroundecanoic acid	1 ug/mL
LC4:2FTS_00003	12/12/21	_	WELLINGTON, Lot 42FTS1216	9	(Purchased Reagent)	ent)	Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	46.7 ug/mL
LC6:2FTS_00003	06/25/21	12	WELLINGTON, Lot 62FTS0616	Q	(Purchased Reagent)	ent)	Sodium	47.4 ug/mL
							<pre>1H,1H,2H,2H-periluorooctane sulfonate (6:2)</pre>	
LC8:2FTS_00003	08/22/21		WELLINGTON, Lot 82FTS0816	9	(Purchased Reagent)	ent)	Sodium 1H,1H,2H,2H-perfluorodecane	47.9 ug/mL
							sarronace (0.2)	

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				4 0 0	Parent Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Volume Reagent ID Added	Analyte	Concentration
LCN-EtFOSAA_00004	09/30/21	WELI	WELLINGTON, LOT NETFOSAA091	916	(Purchased Reagent)	N-ethyl perfluorooctane sulfonamidoacetic acid	7m/bn 05
LCN-MeFOSAA_00005	10/12/21	WELI	WELLINGTON, Lot NMeFOSAA0916	916	(Purchased Reagent)	N-methyl perfluorooctane sulfonamidoacetic acid	20 ug/mL
LCPFBA_00007	05/27/21	Wellingt	Wellington Laboratories, Lot PF	Lot PFBA0516	(Purchased Reagent)	Perfluorobutyric acid	50 ug/mL
LCPFBS_00008	03/15/21	Wellingto	Wellington Laboratories, Lot LP	LPFBS0316	(Purchased Reagent)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA 00008	05/29/22	Wellingt	Wellington Laboratories, Lot PF	Lot PFDA0517	(Purchased Reagent)	Perfluorodecanoic acid	50 ug/mL
LCPFDOA 00008	05/29/22	Wellingto	Wellington Laboratories, Lot PF	Lot PFDoA0517	(Purchased Reagent)	Perfluorododecanoic acid	50 ug/mL
LCPFDSA 00002	05/24/21	Wellingto		LPFDS0516	(Purchased Reagent)	Perfluorodecane Sulfonic acid	48.2 ug/mL
LCPFHpA_00008	12/02/21	Wellingto	Wellington Laboratories, Lot PFI	Lot PFHpA1216	(Purchased Reagent)	Perfluoroheptanoic acid (PFHbA)	20 ng/mF
LCPFHpSA_00003	09/01/22	Wellingto	Wellington Laboratories, Lot LPFHpS0817	FHpS0817	(Purchased Reagent)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00007	12/22/20	Wellingtc		FHxA1215	(Purchased Reagent)	Perfluorohexanoic acid	
LCPFHxS-br_00004	07/03/20	Wellington	Wellington Laboratories, Lot brPF	brPFHxSK0615	(Purchased Reagent)	Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
LCPFNA_00009	07/20/22		Wellington Laboratories, Lot PF	Lot PFNA0717	(Purchased Reagent)	Perfluorononanoic acid (PFNA)	50 ug/mL
LCPFNS_00003	09/27/22		1	Lot LPFNS0917	(Purchased Reagent)	fonic	48 ug/mL
LCPFOA_00009	09/27/22	Wellingt	Wellington Laboratories, Lot PF	Lot PFOA0917	(Purchased Reagent)	Perfluorooctanoic acid (PFOA)	50 ug/mL
LCPFOS-br_00004	10/14/20	Wellingtor	Wellington Laboratories, Lot brP:	t brPFOSK1015	(Purchased Reagent)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00010	09/30/21	Wellingto	Wellington Laboratories, Lot FO	Lot FOSA0916I	(Purchased Reagent)	Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA 00007	05/31/21	Wellingto	Wellington Laboratories, Lot PFPeA0516	PeA0516	(Purchased Reagent)	Perfluoropentanoic acid	50 ug/mL
LCPFPes_00003	01/11/22	Wellingto	Wellington Laboratories, Lot LPF	LPFPeS0117	(Purchased Reagent)	Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA_00006	12/09/20	Wellingto.	Lot	PFTeDA1215		Perfluorotetradecanoic acid	
LCPFTrDA_00006	02/12/21	Wellingto.	Lot	PFTrDA0216	(Purchased Reagent)	Perfluorotridecanoic acid	20 ng/mF
LCPFUdA_00007	10/18/21	Wellingto	Wellington Laboratories, Lot PF	PFUdA1016	(Purchased Reagent)	Perfluoroundecanoic acid	50 ug/mL
LCPFC LL7 00005	11/18/18		06/05/18 MeOH/H2O, Lot 090285	200 mL L	200 mL LCMPFC ALL SU 00075 10 mL	L   d3-NMeFOSAA	2.5 ng/mL
1					I I	d5-NEtFOSAA	
						M2-6:2FTS	2.375 ng/mL
						M2-8:2FTS	2.395 ng/mL
						13C2-PFHxDA	2.5 ng/mL
						13C2-PFOA	2.5 ng/mL
						13C2-PFTeDA	
						13C4-PFHpA	2.5 ng/mL
						13C5-PFPeA	7.5 ng/mL
						13C8 FOSA	
						13C4 FFBA	2.5
						1 1	
							7.3 IIG/IIIL
							Z.5 ng/mL
							2.5 ng/mL
							2.365 ng/mL
							2.5 ng/mL
							2.39 ng/mL
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Lab Name: TestAmerica Sacramento

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				ţ	Parent Reagent			
	E X	Д С	+ + + + + + + + + + + + + + + + + + +	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
					LCPFCSP_00148	4 mL	Sodium 1H, 1H, 2H, 2H-perfluorohexane sulfonate (4:2)	9.34 ng/mL
							Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	9.48 ng/mL
							Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	9.58 ng/mL
							N-ethyl perfluorooctane sulfonamidoacetic acid	10 ng/mL
							N-methyl perfluorooctane sulfonamidoacetic acid	10 ng/mL
							Perfluorobutyric acid	10 ng/mL
							Perfluorobutanesulfonic acid (PFBS)	
							Perfluorodecanoic acid	
							Perfluorododecanoic acid Perfluorodecane Sulfonic acid	10 ng/mL 9.64 ng/mL
							Feriluoroneptanesulionic acid	
							Perfluorohexanesultonic acid (PFHxS)	9.1 ng/mL
							acid	
								10.01 ng/mL
								9.6
							Perfluorooctanesulfonic acid	9.28 ng/mL
							(FFUS) Perfluorooctane Sulfonamide	10 ng/mL
							Perfluoropentanoic acid	
								9.38 ng/mL
							Perfluorotetradecanoic acid	10 ng/mL
							Perfluoroundecanoic acid	10 ng/mL
.LCMPFC_ALL_SU_00075	12/05/18	06/05/18	Methanol, Lot Baker 141039	200 mL	LCd3-NMeFOSAA_00008	200 uL	d3-NMeFOSAA	
					LCd5-NEtFOSAA_00008	200 uL	d5-NEtFOSAA	0.05 ug/mL
					LCM2-6:FTS_00008	200 uL	M2-6:2FTS	
							M2-8:2FTS	0.0479 ug/mL
				•	TOMS PERKUA UUUIB	200 ur	13C2-FFHXDA	0.05 ug/mL
					TCM2DFF0DA 00014		1302 IFOR	
				•	LCM4PFHPA 00014		13C4-PFHpA	0.05 ug/mL
					LCM5PFPEA_00015	200 uL	13C5-PFPeA	
					LCM8FOSA 00019	200 uL	13C8 FOSA	0.05 ug/mL
					LCMPFBA 00015		13C4 PFBA	
_	_		_	_	LCMPFBS_00008	7n nnz	LSCSIFFES	U.0465 ug/mL

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			Reagent	rarent keagent		
Reagent ID	Exp Date	Prep Date	Dilutant Final Used Volume	Nolume Reagent ID Added	e l Analyte	Concentration
				LCPFHpSA 00003 100 uL	ul Perfluoroheptanesulfonic acid	0.476 ug/mL
				LCPFHxA 00010 100 uL	-	0.5 ug/mL
				LCPFHxS-br_00006 100	ul Perfluorohexanesulfonic acid (PFHxS)	0.455 ug/mL
				LCPFNA 00010 100 1	ul Perfluorononanoic acid (PFNA)	0.5 ug/mL
					Perfluorooctanoic acid (PFOA)	0.5005 ug/mL
				00003 100	171	0.48 ug/mL
				100	-+	
				LCPFOS-br_00007 100 uL	uL Perfluorooctanesulfonic acid  (PFOS)	0.464 ug/mL
				LCPFOSA_00013 100	uL Perfluorooctane Sulfonamide	0.5 ug/mL
				00008 100	-	
				100	$\overline{}$	
				100	$\rightarrow$	
				100	Perfluorotridecanoic	
	10/01/01	120	10 LOHUTC /	00	ul Periluoroundecanoic acid	
	12/17/21	3	LOT 42F		Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	46./ ug/mL
LC6:2FTS_00007	04/20/22	W	Lot 62FTS041		Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	47.4 ug/mL
LC8:2FTS_00007	12/12/21	M	WELLINGTON, Lot 82FTS1216	(Purchased Reagent)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
LCbr-NEtFOSAA_00001	01/17/23	WELI	Lot brNEt	l	N-ethyl perfluorooctane sulfonamidoacetic acid	20 ng/mL
LCbr-NMeFOSAA_00001	01/17/23		WELLINGTON, Lot brNMeFOSAA0118	(Purchased Reagent)	N-methyl perfluorooctane sulfonamidoacetic acid	1m/bn 05
LCPFBA_00008	05/29/22		Lot		Perfluorobutyric acid	50 ug/mL
LCPFBS_00009	09/21/22	1	Lot	(Purchased Reagent)	Perfluorobutanesulfonic acid (PFBS)	44.2 ug/mL
LCPFDA_00008	05/29/22	Welling	Wellington Laboratories, Lot PFDA0517	(Purchased Reagent)	Perfluorodecanoic acid	50 ug/mL
LCPFDoA_00008	05/29/22	Wellingt	Laboratories, Lot		Perfluorododecanoic acid	50 ug/mL
LCPFDS 00008	11/08/22	Wellington	Lot		Perfluorodecane Sulfonic acid	
LCPFHpA_00011	09/27/22	Wellingt	Wellington Laboratories, Lot PFHpA0917	(Purchased Reagent)	Perfluoroheptanoic acid (PFHpA)	20 ng/mr
LCPFHpSA_00003	09/01/22	Wellingt	Н	(Purchased Reagent)	Perfluoroheptanesulfonic acid	47.6 ug/mL
LCPFHxA_00010	09/27/22	Wellingt	70	(Purchased Reagent)	Perfluorohexanoic acid	50 ug/mL
LCPFHxS-br_00006	01/04/22	Wellingto	ot br	(Purchased Reagent)	Perfluorohexanesulfonic acid   (PFHxS)	45.5 ug/mL
LCPFNA_00010	07/20/22	Welling	Wellington Laboratories, Lot PFNA0717	(Purchased Reagent)	Perfluorononanoic acid (PFNA) Perfluorooctanoic acid (PFOA)	50 ug/mL 0.05 ug/mL
LCPFNS 00003	09/27/22	Wellingt	Wellington Laboratories, Lot LPFNS0917	(Purchased Reagent)	fonic	
LCPFOA_00011	09/27/22	Welling	Wellington Laboratories, Lot PFOA0917	(Purchased Reagent)	Perfluorooctanoic acid (PFOA)	50 ug/mL
LCPFOS-br_00007	01/12/22	Wellingto	Wellington Laboratories, Lot brPFOSK0117	(Purchased Reagent)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
LCPFOSA 00013	09/01/22	Wellingt	Lot	(Purchased Reagent)	Perfluorooctane Sulfonamide	50 ug/mL
LCPFPeA_00008	06/14/22	Wellingt	Wellington Laboratories, Lot PFPeA0617	(Purchased Reagent)	Perfluoropentanoic acid	20 ng/mL

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SDG No.:

					Parent Reagent			
	Ω × [±	Pren	+מביון וָרַ	Reagent Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
LCPFPes 00003	01/11/22	Wellington	Laboratories, Lot	LPFPeS0117	(Purchased Reagent	nt)	Perfluoropentanesulfonic acid	46.9 ug/mL
LCPFTeDA 00008	09/30/21	Wellington	Laboratories, Lot	PFTeDA0916	(Purchased Reagent)	nt)	Perfluorotetradecanoic acid	
LCPFTrDA 00008	05/02/22	Wellingt	Wellington Laboratories, Lot PF	PFTrDA0517	(Purchased Reagent)	nt)	Perfluorotridecanoic acid	50 ug/mL
LCPFUdA_00008	10/18/21	Wellingt		PFUdA1016		nt)	Perfluoroundecanoic acid	50 ug/mL
LCPFCIC FULL 00011	07/02/18	02/22/18	02/22/18 MeOH/H2O, Lot 09285	$\vdash$	LCMPFC ALL SU 00041	10 mL	13C2-PFOA	2.5 ng/mL
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker 141039	200 mL L	LCM2PFOA_00008	200 uL	13C2-PFOA	0.05 ug/mL
LCM2PFOA 00008	02/12/21	Wellingt	on Laboratories, Lot M2	M2PFOA0216	(Purchased Reagent)	nt)	13C2-PFOA	50 ug/mL
LCPFCIC FULL 00011	07/02/18	02/22/18	02/22/18 MeOH/H20, Lot 09285	H	LCMPFC ALL SU 00041	10 mL	-	
l I					     		d5-NEtFOSAA	2.5 ng/mL
							M2-6:2FTS	2.375 ng/mL
							M2-8:2FTS	2.395 ng/mL
							13C2-PFHxDA	2.5 ng/mL
							13C2-PFTeDA	2.5 ng/mL
							13C4-PFHpA	
							13C5-PFPeA	ا ي
							13C8 FOSA	
							13C4 PFBA	
								2.325 ng/mL
								2.5 ng/mL
								2.5
								2.365 ng/mL
								2.5 ng/mL
							13C4 PFOA	2.5 ng/mL
							13C4 PFOS	2.39 ng/mL
							13C2 PFUnA	- 1
				H	LCPFAC-24PAR_00001	250 uL	Perfluorobutanesulfonic acid (PFBS)	2.2125 ng/mL
							Perfluoroheptanoic acid	2.5 ng/mL
							Perfluorohexanesultonic acid (PFHxS)	7.28 ng/mL
							Perfluorononanoic acid (PFNA)	2.5 ng/mL
							Perfluorooctanesulfonic acid (PFOS)	2.31375 ng/mL
							Perfluorooctanoic acid (PFOA)	2.5 ng/mL
.LCMPFC_ALL_SU_00041	08/20/18	02/20/18	Methanol, Lot Baker	200 mL L	LCd3-NMeFOSAA_00006	200 uL		L)
			) ) 1 1 1	À	LCd5-NEtFOSAA 00006	200 uL	d5-NEtFOSAA	0.05 ug/mL
				Ā	LCM2-6:FTS_00006	200 uL	_	
				À	LCM2-8:2FTS 00008	200 uL	_	0.0479 ug/mL
				Ā	LCM2PFHxDA 00013		$\rightarrow$	
				À			_	
				i i	LCM4PFHPA_00012		_	
				À	LCMSPFPEA 00013		1305-	
				7 1	LCM8FOSA UUUL 6		_	Jm/sn c0.0
	_	_		<u> </u>	LCMFFBA_00013	Z00 UL	L3C4	Tw/bn cn·n

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Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

SDG No.:

			Topoga	+ 5	Parent Reagent			
	дхЭ	Prep	Dilutant Final			Volume		
Reagent ID	Date	Date	Used Volume		Reagent ID	Added	Analyte	Concentration
				LCMPFBS		200 uL	13C3-PFBS	
				LCMPFDA	NA_00018	200 uL	13C2 PFDA	0.05 ug/mL
				LCMPFI	LCMPFDOA_00013	200 uL		0.05 ug/mL
				LCMPFI	0001			0.05 ug/mL
				LCMPFHxS	1xS_00013	200 uL		
				LCMPFNA		- 1	- 1	
				LCMPFOA	00017		- 1	- 1
				LCMPFC	LCMPFOS 00025			
	1			LCMPFU		200 uL	13C2 PFUnA	
LCd3-NMeFOSAA_00006	05/19/22	WEI	WELLINGTON, Lot d3NMeFOSAA0517		- 1	it)	d3-NMeFOSAA	
LCd5-NEtFOSAA 00006	11/08/22	WEI	WELLINGTON, LOT ASNETFOSAAIII/		- 1	(±)	ds-Netfosaa	- 1
LCMZ-6:FTS_00006	02/I1/22	M	WELLINGTON, LOT M262FTS021/		- 1	(±)	M2-6:2F'I'S	
TOWN THIS 00008	0//05/22	W + ~ ~	WELLINGTON, LOT MZ8ZFTSU/1/ Wellington; Cot MZ8ZFTSU/1/	177	(Furchased Reagent)	IT)	MZ-8:ZFTS	4/.9 ug/mL
TCM2 PETENA 00013	11/30/22	16UTTTEM	Wellington Laboratories, Lot M2FFHXDAU/	117	(Purchased Readent)	(-)	13C2-FF # # DA	30 ug/mT.
TCM4PFHPA 00012	05/03/22	Wellingt	Wellington Laboratories, Tot M4PFHpA051	17.	- 1	(-)	13C4-PFHDA	
. LCMSPFPEA 00013	07/20/22	Wellingt	Wellington Laboratories, Lot M5PFPeA071	717		(t)	13C5-PFPeA	
LCM8FOSA 00016	10/11/22	Wellingt	Wellington Laboratories, Lot M8FOSA101	17I		ıt)	13C8 FOSA	
LCMPFBA 00013	04/12/22	Welling	Wellington Laboratories, Lot MPFBA041	17	(Purchased Reagent)	ıt)	13C4 PFBA	50 ug/mL
LCMPFBS_00006	05/24/22	Welling	Wellington Laboratories, Lot M3PFBS081	15	ı	ıt)	13C3-PFBS	46.5 ug/mL
LCMPFDA_00018	07/13/22	Welling	Wellington Laboratories, Lot MPFDA071	17	(Purchased Reagent)	ıt)	13C2 PFDA	50 ug/mL
LCMPFDOA_00013	05/23/22	Melling	Laboratories, Lot	17		ıt)	13C2 PFDoA	50 ug/mL
LCMPFHxA_00019	10/27/22	Wellington	Laboratories, Lot	17		ıt)	13C2 PFHxA	
LCMPFHxS_00013	02/17/22	Welling	Wellington Laboratories, Lot MPFHxS021	17	(Purchased Reagent)	ıt)	1802 PFHxS	47.3 ug/mL
LCMPFNA_00013	09/30/21	Welling		16	(Purchased Reagent)	ıt)	13C5 PFNA	20 ng/mF
LCMPFOA_00017	10/17/22	Welling		1.7		ıt)		20 ng/mF
LCMPFOS 00025	10/17/22	Welling	- 1	17		ıt)		- 1
LCMPFUdA_00014	11/22/21	Welling	Wellington Laboratories, Lot MPFUdA1116	16	(Purchased Reagent)	(t)	13C2 PFUnA	50 ug/mL
.LCPFAC-24PAR_00001	09/15/22	Me	Wellington Laboratories, Lot PFAC24PAR0917		(Purchased Reagent)	(t)	Perfluorobutanesulfonic acid (PFBS)	1.77 ug/mL
							Perfluoroheptanoic acid	2 ug/mL
							Derflucrobexanesulfonic acid	1 824 11cf/mT.
								.
							Perfluorononanoic acid (PFNA)	N
							Perfluorooctanesulfonic acid	1.851 ug/mL
							Perfluorooctanoic acid (PFOA)	2 ug/mL
LCPFCSP_00138	09/20/18		03/20/18  Methanol, Lot 090285   250	250 mL LC11C	LC11CIPF30Uds_00001	100 uL	11-Chloroeicosafluoro-3-oxaund	
					C C C C C C C C C C C C C C C C C C C	T::	ecalle_1_sullollare	Tw/ 2: 030100
				LC4: 71	LC4:2712_00003	TD 00T	2H, 21	TIII / Bn ogo TO: O
				9			sulfonate (4:2)	
				LC6:21	LC6:2FTS_00003	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.01896 ug/mL
				LC8:21	LC8:2FTS_00003	100 uL	Sodium	0.01916 ug/mL
							<pre>1H,1H,2H,2H-periluorodecane sulfonate (8:2)</pre>	
-	-			-				

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Lab Name: TestAmerica Sacramento Job No.: 320-39023-1

				1	Parent Reagent	ıt		
Reagent ID	Exp Date	Prep Date	Dilutant Used	reagent Final Volume	Reagent ID	Volume	Analyte	Concentration
					LC9CI-PF3ONS_00001	100 uL	9-Chlorohexadecafluoro-3-oxano	0.01864 ug/mL
					LCDONA 00001	100 uL	Adona	0.02 ug/mL
					LCHFPO-DA_00001	1	Perfluoro(2-propoxypropanoic)	1
					LCN-EtFOSA-M_00005	100 uL	N-ethylperfluoro-1-octanesulfo namide	0.02 ug/mL
					LCN-EtFOSAA_00004	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.02 ug/mL
					LCN-MeFOSA-M_00004	100 uL		
					LCN-MeFOSAA_00004	100 uL	N-methyl perfluorooctane sulfonamidoacetic acid	0.02 ug/mL
					LCPFBA_00007	100 uL	Perfluorobutyric acid	
					LCPFBS_00008	100 uL	Perfluorobutane Sulfonate Perfluorobutanesulfonic acid (PFRS)	0.01768 ug/mL 0.01768 ug/mL
					LCPFDA 00007	100 uL	Perfluorodecanoic acid	0.02 ug/mL
					LCPFDoA 00007	100 uL		
					LCPFDSA_00002	100 uL	Perfluorodecane Sulfonic acid	0.01928 ug/mL
					LCPFHpA_00008	100 uL	Perfluoroheptanoic acid (PFHpA)	0.02 ug/mL
					LCPFHpSA_00003	100 uL	Perfluoroheptanesulfonic acid	0.01904 ug/mL
					LCPFHxA_00007	100 uL	Perfluorohexanoic acid	0.02 ug/mL
					LCPFHxDA 00008		Perfluorohexadecanoic acid	0.02 ug/mL
					LCPFHxS-br_00004	100 uL		- 1
							Perfluorohexanesulfonic acid (PFHxS)	0.0182 ug/mL
					LCPFNA 00009	100 uL	Perfluorononanoic acid (PFNA)	0.02 ug/mL
						100 uL	Perfluorononanesulfonic acid	0.0192 ug/mL
					LCPFOA 00008	100 uL	Perfluorooctanoic acid (PFOA)	0.02 ug/mL
					LCPFODA 00008	100 uL	Perfluorooctadecanoic acid	0.02 ug/mL
					LCPFOS-br_00004	100 uL	Perfluorooctanesulfonic acid (PFOS)	0.01856 ug/mL
					LCPFOSA 00010	100 uL	Perfluorooctane Sulfonamide	0.02 ug/mL
					LCPFPeA_00007	100 uL	Perfluoropentanoic acid	0.02 ug/mL
					LCPFPes_00003	100 uL	Perfluoropentanesulfonic acid	0.01876 ug/mL
					LCPFTeDA_00007	100 uL	Perfluorotetradecanoic acid	0.02 ug/mL
					LCPFTrDA_00007	100 uL	Perfluorotridecanoic acid	0.02 ug/mL
						100 uL	Perfluoroundecanoic acid	0.02 ug/mL
.LC11CIPF3OUdS_00001	09/30/21	Well	Wellington Labs, Lot 11CIPF3OUdS0916	80916	(Purchased Reagent)	ent)	11-Chloroeicosafluoro-3-oxaund	47.1 ug/mL
.LC4:2FTS 00003	12/12/21		WELLINGTON, Lot 42FTS1216		(Purchased Reagent)	ent)	Sodium	46.7 ug/mL
I							1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	
.LC6:2FTS_00003	06/25/21		WELLINGTON, Lot 62FTS0616		(Purchased Reagent)		Sodium 1H,1H,2H,2H-perfluorooctane	47.4 ug/mL
							sulfonate (6:2)	

Lab Name: TestAmerica Sacramento

Job No.: 320-39023-1

Purchased Reagent   Perflucrobexadecafluoro-3-oxano					4 0 0 0	Parent Reagent			
10		дхд	Prep	Dilutant	Final		Volume	,	
09/20/21   Wellington Labs, Lot SCIPSOSIÓ   Purchased Reagent   Stationocodecane   Stat		Date		Jsed	Volume	ID	Added		Concentration
09/30/21   Wellington Labs, 1ot SCFFF3ONSO916   Uprchased Reagent)   Section of Section 2   October 2   October 3   October	.LC8:2FTS_00003	08/22/21	WEI	Lot 82FTS081	(O		nt)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
09/10/22	.LC9CI-PF3ONS_00001	09/30/21	Welling	Lot 9CI	.80916		nt)	9-Chlorohexadecafluoro-3-oxano nane-1-sulfonate	46.6 ug/mL
07/34/21   07/34/21   WELLINGTON, Lot NEFOSA0316M   Purchased Reagent)	.LCDONA 00001		MEL		7	1	nt)	Adona	50 ug/mL
09/30/21   WELLINGTON, LOW INTECDSA0316M   Purchased Reagent   Perflorobutates Sulfonte   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobutates Sulfonte   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobutates Sulfonte   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobutates Sulfonte   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobutates Sulfonte   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobetancia acid   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobetancia acid   D5/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA316   Purchased Reagent   Perflorobetancia acid   D7/37/22   Wellington Laboratories, Lot PEPROA317   Purchased Reagent   Perflo	.LCHFPO-DA_00001	07/03/20	WEL	, Lot HFPO	7		nt)	Perfluoro(2-propoxypropanoic) acid	50 ug/mL
10.004   09.730/21   WELLINGTON, Lot NREFOSANO916   Curchased Reagent)   Neglocal Coctange	.LCN-EtFOSA-M_00005	05/24/21	WELL	Lot NEtFO	МЭ	1	nt)	N-ethylperfluoro-1-octanesulfo namide	50 ug/mL
10/24/21   WELLINGTON, Lot NAME-DORAGOSIGN	.LCN-EtFOSAA_00004	09/30/21	WELL	Lot	16	1	nt)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
10.12/2	.LCN-MeFOSA-M 00004	05/24/21	WELL	l	M9		nt)	Mefosa	50 ug/mL
05/27/21   Wellington Laboratories, Lot PPRA0516 (Purchased Reagent)   Perfluorobutanes Sulfonder	.LCN-MeFOSAA_00004	10/12/21	WELL	Lot NMeFO	16		nt)		20 ng/mL
03/15/21   Wellington Laboratories, Lot LPFB30316   Purchased Reagent)   Perfluorobutenes Sulfonic acid	.LCPFBA_00007	05/27/21	Wellingto	l	FBA0516		nt)	Perfluorobutyric acid	20 ng/mL
05/31/21   Wellington Laboratories, Lot PFDA0516   (Purchased Reagent)   Perfluorodecanoic acid	.LCPFBS_00008	03/15/21	Wellingto	Lot	FBS0316		nt)	Perfluorobutane Sulfonate Perfluorobutanesulfonic acid	44.2 ug/mL 44.2 ug/mL
05/24/21   Wellington Laboratories, Lot PFD0A0516 (Purchased Reagent)   Perfluorodeceans Olifonic acid (Purchased Reagent)   Perfluorodecans Olifonic acid (Purchased Reagent)   Perfluorodecansolic acid (PPRA) (Purchased Reagent)   Perfluoroctanolic acid (PPRA) (PURCHASED) (Purchased Reagent)   Perfluoroctanolic acid (PPRA) (PURCHASED) (PURCHASED) (PURCHASED REAGENT)   Perfluoroctanolic acid (PPRA) (PURCHASED) (PURCHASED REAGENT)   Perfluoroctanolic acid (PPRA) (PURCHASED REAGENT)   Perfluoroctanolic acid (PURCHASED REAGENT)   PERFLUOROSE   PURCHASE	.LCPFDA 00007	05/31/21	Wellingto		FDA0516	(Purchased Reage	nt)	Perfluorodecanoic acid	50 ug/mL
12/02/21   Wellington Laboratories, Lot PFPRAISI6 (Furchased Reagent)   Perfluorodecane Sulfonic acid (FPRA)   Perfluorodecane Sulfonic acid (FPRA)   Perfluorodecane Sulfonic acid (FPRA)   Perfluorodecane Sulfonic acid (PERA)   Perfluorodecane Sulfon	.LCPFDoa 00007	05/31/21	Wellingto	Lot	DoA0516	(Purchased Reade	nt)	Perfluorododecanoic acid	50 ug/mL
12/02/21   Wellington Laboratories, Lot PFHpA1216   (Purchased Reagent)   Perfluctocheptanesulfonic acid (PFHpA)   Perfluctocheptanesulfonic acid (PFHpA)   (Purchased Reagent)   Perfluctocheptanesulfonic acid (PPDA)   (Purchased Reagent)   Perfluctocheptanesulfonic acid (PDA)   (PD	.LCPFDSA 00002	05/24/21	Wellingto	Lot	FDS0516		nt)		48.2 ug/mL
19/01/22   Wellington Laboratories, Lot IPFH950817   Perfluoroheptanesulfonic acid	.LCPFHpA_00008	12/02/21	Wellingto	Lot	HpA1216	(Purchased Reage	nt)	Perfluoroheptanoic acid (PFHpA)	
12/22/20   Wellington Laboratories, Lot PFHxD1215 (Purchased Reagent)   Perfluorohexane acid	.LCPFHpsA 00003	09/01/22	Wellingtor	n Laboratories, Lot LPE	FHpS0817		nt)		47.6 ug/mL
05/29/21 Wellington Laboratories, Lot PFFHxSK0615 (Purchased Reagent) Perfluorohexadecanoic acid (PNA) Perfluorohexane Sulfonate Perfluorohexane Sulfonate Perfluorohexane Sulfonate Perfluorohexane Sulfonate Perfluorohexane Sulfonate Perfluorohexane Sulfonate (PNA) (PNZ) Mellington Laboratories, Lot PFORM16 (Purchased Reagent) Perfluorocotanesulfonic acid (PFOA) (PNZ) Mellington Laboratories, Lot PFORM16 (Purchased Reagent) Perfluorocotanesulfonic acid (PFOB) (PNZ) Mellington Laboratories, Lot PFORM16 (Purchased Reagent) Perfluorocotane Sulfonamide (PNZ) (PNZ) Mellington Laboratories, Lot PFPERM16 (Purchased Reagent) Perfluoropentanesulfonic acid (PNZ) (PNZ) Mellington Laboratories, Lot PFPERM16 (Purchased Reagent) Perfluoropentanesulfonic acid (PNZ) (PNZ) Mellington Laboratories, Lot PFPERM16 (Purchased Reagent) Perfluoropentanesulfonic acid (PNZ) (PNZ) Mellington Laboratories, Lot PFPERM16 (Purchased Reagent) Perfluoropentanesulfonic acid (PNZ) (PNZ) Mellington Laboratories, Lot PFPERM16 (PNZ) (PNZ) Perfluoropentanesulfonic acid (PNZ) (P	.LCPFHxA 00007	12/22/20	Wellingto	n Laboratories, Lot PF	HxA1215		nt)	Perfluorohexanoic acid	50 ug/mL
Original Mellington Laboratories, Lot brPRASNO615 (Purchased Reagent)   Perfluorohexane Sulfonate   Perfluorohexane Sulfonate	.LCPFHxDA_00008	05/25/21	Wellingtor	n Laboratories, Lot PFF	1xDA0516	(Purchased Reage	nt)	Perfluorohexadecanoic acid	50 ug/mL
Perflucrohexanesulfonic acid (PFNRA)   Perflucrohexanesulfonic acid (PFNRA)   O7/20/22   Wellington Laboratories, Lot LPFNS0917 (Purchased Reagent)   Perflucrononanesulfonic acid (PFNRA)   O8/22/12   Wellington Laboratories, Lot PFOA0716 (Purchased Reagent)   Perflucrocctanoic acid (PFOA)   O8/29/21   Wellington Laboratories, Lot PFOA0716 (Purchased Reagent)   Perflucrocctanoic acid (PFOA)   O8/29/21   Wellington Laboratories, Lot PFPER0515 (Purchased Reagent)   Perflucrocctanesulfonic acid (PFOA)   O5/31/21   Wellington Laboratories, Lot PFPER0516 (Purchased Reagent)   Perflucrocctanesulfonic acid (PFOA)   O5/31/22   Wellington Laboratories, Lot PFPER0516 (Purchased Reagent)   Perflucropentanoic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFPER0516 (Purchased Reagent)   Perflucropentanesulfonic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFPER0516 (Purchased Reagent)   Perflucropentanesulfonic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   Perflucropentanesulfonic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   Perflucroctetradecanoic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   Perflucroctetradecanoic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   Perflucroctetradecanoic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   Perflucroctetradecanoic acid (PFOA)   O6/31/22   Wellington Laboratories, Lot PFFDA0916 (Purchased Reagent)   O6/31/22   O6/31/	.LCPFHxS-br_00004	07/03/20	Wellington		FHXSK0615	(Purchased Reage	nt)	Perfluorohexane Sulfonate	
07/20/22   Wellington Laboratories, Lot PFNA0717   (Purchased Reagent)   Perfluorononanoic acid (PFNA)	ı							Perfluorohexanesulfonic acid (PFHxS)	45.5 ug/mL
09/27/22   Wellington Laboratories, Lot PFOA0716   (Purchased Reagent)   Perfluorooctanoic acid (PFOA)	.LCPFNA_00009	07/20/22	Wellingto	Laboratories, Lot	FNA0717		nt)	Perfluorononanoic acid (PFNA)	20 ng/mT
08/02/21   Wellington Laboratories, Lot PFOA0416 (Purchased Reagent)   Perfluorocctanoic acid (PFOA)	.LCPFNS_00003	09/27/22	Wellingto	Lot	FNS0917		nt)	Perfluorononanesulfonic acid	48 ug/mL
Moderation   Moderation   Moderatories   Moderato	.LCPFOA 00008	08/02/21	Wellingto	- 1	F0A0716	- 1	nt)	_	
10/14/20 Wellington Laboratories, Lot brPFOSK1015 (Purchased Reagent) (PFOS)  (PFOS)  (PFOS)  (PSA09161 (Purchased Reagent) (Perfluorocctane Sulfonamide acid not in the properties of the perfluorocctane Sulfonamide acid not in the perfluction Laboratories, Lot PFPEA0516 (Purchased Reagent) (Perfluoropentanesulfonic acid not not not not laboratories, Lot PFTEDA0216 (Purchased Reagent) (Perfluoropentanesulfonic acid not	.LCPFODA 00008	04/29/21	Wellingto	n Laboratories, Lot PF	ODA0416		nt)	Perfluorooctadecanoic acid	20 ng/mT
09/30/21 Wellington Laboratories, Lot FPEA0516 (Purchased Reagent) Perfluorocetane Sulfonamide 7 05/31/21 Wellington Laboratories, Lot LPFPeS0117 (Purchased Reagent) Perfluoropentanoic acid 8 01/11/22 Wellington Laboratories, Lot LPFPeS0117 (Purchased Reagent) Perfluoropentanesulfonic acid 9 09/30/21 Wellington Laboratories, Lot PFTDA0916 (Purchased Reagent) Perfluorotetradecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluorotetradecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroperance acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroperance acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroperance acid 9 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroperance acid	LCPFOS-br_00004	10/14/20	Wellington	Laboratories, Lot brP	FOSK1015		nt)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
01/11/22 Wellington Laboratories, Lot PFPeRO516 (Purchased Reagent) Perfluoropentanoic acid 01/11/22 Wellington Laboratories, Lot LPFPeSO117 (Purchased Reagent) Perfluoropentanesulfonic acid 07 09/30/21 Wellington Laboratories, Lot PFTDA0916 (Purchased Reagent) Perfluorotetradecanoic acid 07 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluorotetradecanoic acid 07 10/18/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluoroundecanoic acid 07 10/18/21 Wellington Laboratories, Lot PFUGA1016 (Purchased Reagent) Perfluoroundecanoic acid 08 11/15/18 05/15/18 Methanol, Lot 090285 250 mL LC11CIPFF30UdS_00001 100 uL 11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonate (11,11,11,11,11,11,11,11,11,11,11,11,11,	.LCPFOSA 00010	09/30/21	Wellingto		SA0916I		nt)	Perfluorooctane Sulfonamide	50 ug/mL
01/11/22 Wellington Laboratories, Lot LPFPeS0117 (Purchased Reagent) Perfluoropentanesulfonic acid 09/30/21 Wellington Laboratories, Lot PFTDA0916 (Purchased Reagent) Perfluorotetradecanoic acid 07 02/12/21 Wellington Laboratories, Lot PFTDA0216 (Purchased Reagent) Perfluorotridecanoic acid 07 10/18/21 Wellington Laboratories, Lot PFTDA016 (Purchased Reagent) Perfluoroundecanoic acid 07 10/18/21 Wellington Laboratories, Lot PFUGA1016 (Purchased Reagent) Perfluoroundecanoic acid 08 11/15/18 05/15/18 Methanol, Lot 090285 250 mL LC11CIPF30UdS_00001 100 uL 11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonate 08 11/15/18 11/15/18 Lot 090285 Lot PFUGA1016 LC4:2FTS_0003 100 uL 11/14/2H.2H-Perfluorohexane lt, LC4:2FTS_0003 100 uL 11/14/2H.2H-Perfluorohexane lt, LC4:2Danage lt, LC4:2D	.LCPFPeA 00007	05/31/21	Wellingto	Lot	PeA0516		nt)	Perfluoropentanoic acid	50 ug/mL
09/30/21   Wellington Laboratories, Lot PFTeDA0916   (Purchased Reagent)   Perfluorotetradecanoic acid     02/12/21   Wellington Laboratories, Lot PFTrDA0216   (Purchased Reagent)   Perfluorotridecanoic acid     10/18/21   Wellington Laboratories, Lot PFTdA1016   (Purchased Reagent)   Perfluorotridecanoic acid     11/15/18   05/15/18   Methanol, Lot 090285   250 mL   LC11CIPF30UdS_00001   100 uL   11-Chloroeicosafluoro-3-oxaund     11/15/18   C5/15/18   C5	.LCPFPes 00003		Wellingtor	Lot	FPeS0117		nt)		46.9 ug/mL
07 (2/12/21 Wellington Laboratories, Lot PFTrDA0216 (Purchased Reagent) Perfluorotridecanoic acid  10/18/21 Wellington Laboratories, Lot PFUdA1016 (Purchased Reagent) Perfluoroundecanoic acid  11/15/18 05/15/18 Methanol, Lot 090285 250 mL LC11CIPF30UdS_00001 100 uL 11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonate  11/15/18 05/15/18 Methanol, Lot 090285 LC4:2FTS_00003 100 uL 11,11,21,21,21-Perfluorohexane lt,11,11,21,21-Perfluorohexane lt,11,12,12,21-Perfluorohexane lt,11,12,12,12,12,12,12,12,12,12,12,12,12,	.LCPFTeDA_00007	09/30/21	Wellingtor	Lot	reDA0916		nt)	Ŋ	50 ug/mL
10/18/21   Wellington Laboratories, Lot PFUdAl016   (Purchased Reagent)   Perfluoroundecanoic acid     11/15/18   05/15/18   Methanol, Lot 090285   250 mL   LCIICIPF30UdS_00001   100 uL   11-Chloroeicosafluoro-3-oxaund	.LCPFTrDA_00007	02/12/21	Wellingtor	Lot	rrDA0216		nt)		20 ug/mL
11/15/18   05/15/18   Methanol, Lot 090285   250 mL   LC11CIPF3OUdS_00001   100 uL   11-Chloroeicosafluoro-3-oxaund   ecane-1-sulfonate   LC4:2FTS_00003   100 uL   Sodium   LC4:2FTS_00003   100 uL   Sodium   L1,1H,2H,2H-perfluorohexane   l1,1H,2H-perfluorohexane   sulfonate (4:2)	.LCPFUdA 00007	10/18/21	Wellingto	Lot	UdA1016		nt)		50 ug/mL
100 uL Sodium 11,11,2H,2H-perfluorohexane sulfonate (4:2)	LCPFCSP_00144	11/15/18				LC11CIPF3OUdS_00001		11-Chloroeicosafluoro-3-oxaund   ecane-1-sulfonate	0.01884 ug/mL
						LC4:2FTS_00003		Sodium 1H,1H,2H,2H-perfluorohexane sulfonate (4:2)	0.01868 ug/mL

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				Reagent	Farent Keagent	בור 		
Reagent ID	Exp Date	Prep Date	Dilutant Dilutant Vsed V	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
					LC6:2FTS_00003	100 uL	Sodium 1H,1H,2H,2H-perfluorooctane sulfonate (6:2)	0.01896 ug/mL
				1	LC8:2FTS_00003	100 uL		0.01916 ug/mL
					LC9CI-PF3ONS_00001	100 uL	sulfonate (8:2) 9-Chlorohexadecafluoro-3-oxano nane-1-sulfonate	0.01864 ug/mL
				-	LCbr-NEtFOSAA_00001	100 uL	N-ethyl perfluorooctane sulfonamidoacetic acid	0.02 ug/mL
					LCbr-NMeFOSAA_00001	100 uL	N-methyl perfluorooctane	0.02 ug/mL
					LCDONA_00001	100 uL	Adona	0.02 ug/mL
					LCHFPO-DA_00001	100 uL	Perfluoro(2-propoxypropanoic) acid	0.02 ug/mL
					LCN-EtFOSA-M_00005	100 uL	-	0.02 ug/mL
				-	LCN-MeFOSA-M 00004	100 uL	MeFOSA	0.02 ug/mL
					LCPFBA_00007	100 uL	$\rightarrow$	0.02 ug/mL
					LCPFBS_00008	100 uL		
							Perfluorobutanesulfonic acid (PFBS)	0.01768 ug/mL
					LCPFDA 00007	100 uL	Perfluorodecanoic acid	0.02 ug/mL
					LCPFDoA 00007	100 uL	Perfluorododecanoic acid	
					LCPFDSA_00002		-	
					LCPFHpA_00008	100 uL	Perfluoroheptanoic acid	0.02 ug/mL
				<u> </u>	LCPFHpSA 00003	100 uL	(PrhpA) Perfluoroheptanesulfonic acid	0.01904 ug/mL
				1	LCPFHXA 00007	- 1	Perfluorohexanoic acid	0.02 ug/mL
				1	LCPFHxDA 00008	100 uL	_	0.02 ug/mL
					LCPFHxS-br_00004	100 uL	$\vdash$	0.0182 ug/mL
							Perfluorohexanesulfonic acid (PFHxS)	0.0182 ug/mL
					LCPFNA_00009	100 uL	Perfluorononanoic acid (PFNA)	0.02 ug/mL
						100 uL	Perfluorononanesulfonic	0.0192 ug/mL
					LCPFOA 00008	100 uL	Perfluorooctanoic acid (PFOA)	0.02 ug/mL
					LCPFODA 00008		Perfluorooctadecanoic ac	- 1
					LCPFOS-br_00004	100 uL	Perfluorooctanesultonic acid (PFOS)	0.01856 ug/mL
						100 uL		0.02 ug/mL
							Perfluoropentanoic acid	0.02
					ICPFPes 00003	100 uL	_	
					ICPFTEDA 00007	- 1	_	- 1
					TCPFIICA 00007	100 uL	Perfluorounderanoic acid	0.02 ug/mT.
.LC11CIPF30UdS_00001	09/30/21	Welling	Wellington Labs, Lot 11CIPF3OUdS0916		12			47.1
				1			ecane-1-sullonare	

Lab Name: TestAmerica Sacramento

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				+ 2 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
.LC4:2FTS_00003	12/12/21		WELLINGTON, Lot 42FTS1216	10	(Purchased Reagent)	1t)	Sodium 1H, 1H, 2H, 2H-perfluorohexane	46.7 ug/mL
.LC6:2FTS_00003	06/25/21		WELLINGTON, Lot 62FTS0616	10	(Purchased Reagent)	1t)	~	47.4 ug/mL
.LC8:2FTS_00003	08/22/21		WELLINGTON, Lot 82FTS0816	10	(Purchased Reagent)	1t)	Sodium 1H,1H,2H,2H-perfluorodecane sulfonate (8:2)	47.9 ug/mL
.LC9CI-PF3ONS_00001	09/30/21	Welli	Wellington Labs, Lot 9CIPF3ONS091	80916	(Purchased Reagent)	ıt)		46.6 ug/mL
.LCbr-NEtFOSAA_00001	01/17/23	WEI	WELLINGTON, Lot brNEtFOSAA0118	118	(Purchased Reagent)	ıt)	N-ethyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCbr-NMeFOSAA_00001	01/17/23	WEI	WELLINGTON, Lot brNMeFOSAA0118	118	(Purchased Reagent)	1t)	N-methyl perfluorooctane sulfonamidoacetic acid	50 ug/mL
.LCDONA 00001	04/10/22	M	WELLINGTON, Lot NADONA0417	7	(Purchased Reagent	11)	Adona	20 ng/mL
.LCHFPO-DA_00001	07/03/20	M	WELLINGTON, Lot HFPODA0717	7	(Purchased Reagent)	ıt)	Perfluoro(2-propoxypropanoic) acid	20 ng/mT
.LCN-EtFOSA-M_00005	05/24/21	ME	WELLINGTON, Lot NEtFOSA0516M	М9	(Purchased Reagent)	ıt)	N-ethylperfluoro-1-octanesulfo namide	20 ng/mT
.LCN-MeFOSA-M_00004	05/24/21	WE	WELLINGTON, Lot NMeFOSA0516M	6M	(Purchased Reagent)	1t)	MeFOSA	20 ng/mL
.LCPFBA_00007	05/27/21	Wellin		PFBA0516		ıt)	Perfluorobutyric acid	20 ng/mL
.LCPFBS_00008	03/15/21	Welling		Lot LPFBS0316	(Purchased Reagent)	ıt)	Perfluorobutane Sulfonate	44.2 ug/mL
							Perfluorobutanesultonic acid (PFBS)	44.2 ug/mL
.LCPFDA_00007	05/31/21	Wellin	Wellington Laboratories, Lot PF	PFDA0516	(Purchased Reagent)	ıt)	Perfluorodecanoic acid	20 ng/mL
.LCPFDoA_00007	05/31/21	Welling		Lot PFDoA0516		ıt)	Perfluorododecanoic acid	20 ng/mT
.LCPFDSA_00002	05/24/21	Welling		Lot LPFDS0516	(Purchased Reagent)	ıt)	Perfluorodecane Sulfonic acid	48.2 ug/mL
.LCPFHpA_00008	12/02/21	Welling	Wellington Laboratories, Lot PF	PFHpA1216	(Purchased Reagent)	ıt)	Perfluoroheptanoic acid (PFHpA)	50 ug/mL
.LCPFHpSA_00003	09/01/22	Welling.	Wellington Laboratories, Lot LPFHpS0817	'HpS0817	(Purchased Reagent)	ıt)	Perfluoroheptanesulfonic acid	47.6 ug/mL
.LCPFHxA_00007	12/22/20	Welling		HxA1215		ıt)	Perfluorohexanoic acid	50 ug/mL
.LCPFHxDA_00008	05/25/21	Welling	Wellington Laboratories, Lot PFH	Lot PFHxDA0516		ıt)	Perfluorohexadecanoic acid	50 ug/mL
.LCPFHxS-br_00004	07/03/20	Wellingt	Wellington Laboratories, Lot brPFHxSK0615	THXSK0615	(Purchased Reagent)	ıt)	Perfluorohexane Sulfonate	
					- 1		tonı	45.5 ug/mL
.LCPFNA_00009	07/20/22	Wellin	Lot	NA0717	- 1	ıt)	Perfluorononanoic acid (PFNA)	50 ug/mL
.LCPFNS_00003	09/27/22	Welling	Lot	LPFNS0917	(Purchased Reagent)	ıt)	Perfluorononanesulfonic acid	
.LCPFOA_00008	08/02/21	Wellin	Wellington Laboratories, Lot PF	PFOA0716	(Purchased Reagent)	ıt)	Perfluorooctanoic acid (PFOA)	50 ug/mL
.LCPFODA_00008	04/29/21	Welling	Wellington Laboratories, Lot PF	PFODA0416	(Purchased Reagent	ıt)	Perfluorooctadecanoic acid	20 ng/mL
.LCPFOS-br_00004	10/14/20	Wellingt	Wellington Laboratories, Lot brPFOSK1015	FOSK1015	(Purchased Reagent)	ıt)	Perfluorooctanesulfonic acid (PFOS)	46.4 ug/mL
.LCPFOSA_00010	30,	Welling	Lot	Lot FOSA0916I		1t)	Perfluorooctane Sulfonamide	50 ug/mL
.LCPFPeA_00007	05/31/21	Welling	Wellington Laboratories, Lot PF	PFPeA0516	(Purchased Reagent)	1t)	Perfluoropentanoic acid	50 ug/mL
.LCPFPes_00003	01/11/22	Welling	Wellington Laboratories, Lot LPF	Lot LPFPeS0117		ıt)	Perfluoropentanesulfonic acid	46.9 ug/mL
.LCPFTeDA_00007	09/30/21	Welling	Laboratories, Lot	PFTeDA0916	- 1	ıt)	Perfluorotetradecanoic acid	20 ng/mT
.LCPFTrDA 00007	02/12/21	Wellington	Laboratories, Lot	PFTrDA0216		ıt)	Perfluorotridecanoic acid	50 ug/mL
.LCPFUdA_00007	10/18/21	Welling	Wellington Laboratories, Lot PF	Lot PFUdA1016	(Purchased Reagent)	ıt)	Perfluoroundecanoic acid	20 ng/mF

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SDG No.:

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100 ug/mL ng/mL 5000 ug/mL 5000 ug/mL ng/mL ng/mL ng/mL Concentration 100 ug/mL 100 ug/mL 100 ug/mL 100 ug/mL 100 ng/mL 100 ug/mL ng/mL ng/mL 100 ug/mL 100 ug/mL 100 ug/mL 100 ug/mL 100 ug/mL 5000 ug/mL 5000 ug/mL ng/mL ng/mL 5000 ug/mL 5000 ug/mL 2000 ug/mL 100 100 007 5000 2,4,6-Tribromophenol (Surr) (Surr) Surr Surr) Terphenyl-d14 (Surr)
2,4,6 - Tribromophenol
2,4,6-Tribromophenol (S
2-Fluorobiphenyl - Tribromopheno Nitrobenzene-d5 (Surr) Nitrobenzene-d5 (Surr)
Phenol-d5 (Surr) Nitrobenzene-d5 (Surr) (Surr) (Surr) 2,4,6 - Tribromopheno (Surr Tribromopheno 2,4,6 - Tribromopheno. Tribromopheno 2,4,6-Tribromophenol (Surr) (Surr) (Surr) 2,4,6 - Tribromophenc 2,4,6-Tribromophenol (Surr) (Surr) 2,4,6-Tribromophenol 2-Fluorobiphenyl 2,4,6-Tribromophenol Terphenyl-d14 (Surr) Terphenyl-d14 (Surr) Terphenyl-d14 (Surr) Terphenyl-d14 (Surr) Analyte Nitrobenzene-d5 2-Fluorophenol (Nitrobenzene-d5 2-Fluorobiphenyl Phenol-d5 (Surr) Phenol-d5 (Surr) Phenol-d6 Phenol-d5 (Surr) Nitrobenzene-d5 2-Fluorobipheny. Phenol-d5 (Surr) 2-Fluorobipheny (Surr 2-Fluorophenol 2-Fluorophenol 2-Fluorophenol 2-Fluorophenol 2-Fluorobiphen 2-Fluorophenol Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d6 Phenol-d6 2,4,6 Phenol 5 mL 5 mL 5 mL 5 mL Volume Added (Purchased Reagent) (Purchased Reagent) Parent Reagent 8270SurStkHL\_00261 8270SurstkHL\_00263 8270SurstkHL 00258 8270SurstkHL\_00262 Reagent ID 1000 mL Reagent Volume Final Restek, Lot A0130500 Restek, Lot A0130500 Dilutant Used 03/16/19 04/26/18 ACETONE, Lot Acetone\_00211 Prep Date 09/30/22 09/30/22 Exp Date 8270Surrogate\_00118 .8270SurStkHL 00258 .8270SurStkHL 00261 Reagent ID

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				Reagent				
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL 00262	09/30/22		Restek, Lot A0130500		(Purchased Reagent)	ent)	10	
							T	
							71	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5 (Surr)	5000 ug/mL
							Phenol-d5 (Surr)	
								5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
.8270SurStkHL_00263	09/30/22		Restek, Lot A0130500		(Purchased Reagent)	ent)	2,4,6 - Tribromophenol	
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							-	
							Nitrobenzene-d5 (Surr)	
							Phenol-d5 (Surr)	
							Phenol-d6	5000 ug/mL
							Terphenyl-d14 (Surr)	2000 ng/mL
8270TCLPSpike_00058	12/22/18	03/27/18	P&T Methanol, Lot MethanolP&T 00196	100 mL	8270 TCLP Stk_00075	4 mL	1,4-Dichlorobenzene	20 ug/mL
			ı				2,4,5-Trichlorophenol	50 ug/mL
							2,4,6-Trichlorophenol	20 ng/mL
							2,4-Dinitrotoluene	20 ug/mL
							2-Methylphenol	20 ng/mF
							3 & 4 Methylphenol	100 ug/mL
							3-Methylphenol	
							4-Methylphenol	
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ng/mL
							Hexachloroethane	50 ug/mL
							Nitrobenzene	50 ug/mL
							Pentachlorophenol	100 ug/mL
							Pyridine	50 ug/mL
				-	8270 TCLP Stk_00077	6 mL	1,4-Dichlorobenzene	20 ng/mL
							2,4,5-Trichlorophenol	20 ng/mL
							2,4,6-Trichlorophenol	20 ng/mL
							2,4-Dinitrotoluene	20 ug/mL
							2-Methylphenol	20 ng/mF
							3 & 4 Methylphenol	
							3-Methylphenol	100 ug/mL
							4-Methylphenol	100 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ng/mL
							Hexachloroethane	20 ng/mF
							Nitrobenzene	20 ng/mF
							Pentachlorophenol	100 ug/mL
							Pyridine	50 ug/mL
.8270 TCLP Stk_00075	03/20/19		Supelco, Lot LC26210V		(Purchased Reagent)	ent)	1,4-Dichlorobenzene	200 ng/mL
							2,4,5-Trichlorophenol	200 ug/mL

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					Darrent Reagent		
	-			Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID Added	Analyte	Concentration
						2,4,6-Trichlorophenol	500 ug/mL
						2,4-Dinitrotoluene	200 ug/mL
						2-Methylphenol	200 ng/mL
						3 & 4 Methylphenol	1000 ug/mL
						3-Methylphenol	
						4-Methylphenol	
						Hexachlorobenzene	200 ug/mL
						Hexachlorobutadiene	500 ug/mL
						Hexachloroethane	200 ng/mL
						Nitrobenzene	500 ug/mL
						Pentachlorophenol	1000 ug/mL
						Pyridine	500 ug/mL
.8270 TCLP Stk_00077	12/22/18		Supelco, Lot LC26210V		(Purchased Reagent)	1,4-Dichlorobenzene	
						2,4,5-Trichlorophenol	500 ug/mL
						2,4,6-Trichlorophenol	500 ug/mL
						2,4-Dinitrotoluene	
						2-Methylphenol	500 ug/mL
						3 & 4 Methylphenol	
						3-Methylphenol	1000 ug/mL
						4-Methylphenol	1000 ug/mL
						Hexachlorobenzene	
						Hexachlorobutadiene	500 ug/mL
						Hexachloroethane	500 ug/mL
						Nitrobenzene	200 ng/mL
						Pentachlorophenol	1000 ug/mL
						Pyridine	500 ug/mL
MS-DFTPP 00046						Aramite, Total	
ı							
						Isosafrole	
						Methyl Phenols, Total	
						Tentatively Identified	
						Compound	
						Total Cresols	
					MS-47548-II 00015 1 mT.	_	0 05 11g/mT.
				•			0.05 ug/mL
						4,4'-DDT	50 ug/mL
						Benzidine T	50 ug/mL
						Pentachlorophenol T	
.MS-47548-U 00015	03/31/19		Supelco, Lot XA19099V		(Purchased Reagent)	4,4'-DDD	1 ug/mL
I						4,4'-DDE	1 ug/mL
						4,4'-DDT	1000 ng/mL
						Benzidine T	1000 ug/mL
						Fentachlorophenol T	Tm/bn n00T

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				Reagent	ratelle heagell	- 1	
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added Analyte	Concentration
MS-FAMSSV_100_00018	06/22/18	02/08/18	Methylene Chloride, Lot 181545	0.5 mL	MS-IS_00013	50 uL 1,4-Dichlorobenzene-d4	40 ug/mL
						Acenaphthene-d10	40 ug/mL
						Chrysene-d12	
						Naphthalene-d8	
						Perylene-d12	- 1
ST-3M	0 1 / 00 / 30	71/00/90		С П Т	MS _ E 67 68 4 0001 9	Fuenanthrene-alo	
. MS_LS_COOLS	00/22/18	11/77/00	Metnylene Chioride, bot 157164	TW 007	M2-36/684_00018		400 ug/mL
						Acenaphthene-d10	400 ug/mL
						Chrysene-d12	400 ug/mL
						Naphthalene-d8	
						Perylene-d12	
0	7		F		- 1		
61000 4884 CINE	07/37/70		Kestek, Lot Autizoss		(rurcilasea Reageile,	ant) 1,4-Dichiologenzene-α4 Acenaphthene-d10	2000 ug/mL
						Chrysene-d12	
						Naphthalene-d8	
						Perylene-d12	2000 ug/mL
						Phenanthrene-d10	2000 ug/mL
MS-HSLA004_00035	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-HSLA_STK_00040	10 uL 2,4,6-Tribromophenol (Surr)	4 ug/mL
			181545			E C	
						Sil.	
						Z-Fluorophenol (Surr)	
						sne-ab	
						Frenol-dS (Surr) Terphenyl-d14 (Surr)	4 ug/mL 4 ug/mL
						Alachlor	
						3,3'-Dichlorobenzidine	
						Benzoic acid	
						Atrazine	
						Caprolactam	4 ug/mL
						1,1'-Biphenyl	
						1,2,4,5-Tetrachlorobenzene	4 ug/mL
						1.2-Dichlorobenzene	
						1,2-Diphenylhydrazine	
						1,3-Dichlorobenzene	4 ug/mL
						1,3-Dinitrobenzene	4 ug/mL
						1,4-Dichlorobenzene	4 ug/mL
						1,4-Dioxane	4 ug/mL
						1-Methylnaphthalene	
						2,2'-oxybis[l-chloropropane]	4 ug/mL 4 ug/mL
						2.4.5-Trichlorophenol	
						2,4,6-Trichlorophenol	
						2,4-Dichlorophenol	

Lab Name: TestAmerica Denver

SDG No.:

Lab Name: TestAmerica Denver

SDG No.:

					, C	Parent Reagent	it.		
Reagent ID	Exp Date	Prep Date	Dilutant Used	ıt	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
								Hexachlorobutadiene	4 ug/mL
								Hexachlorocyclopentadiene	
								Hexachloroethane	4 ug/mL
								Indeno[1,2,3-cd]pyrene	4 ug/mL
								Isophorone	4 ug/mL
								N-Nitrosodi-n-propylamine	4 ug/mL
								N-Nitrosodimethylamine	4 ug/mL
								N-Nitrosodiphenylamine	4 ug/mL
								Naphthalene	4 ug/mL
								Nitrobenzene	4 ug/mL
								Pentachlorophenol	8 ug/mL
								Phenanthrene	- 1
								Phenol	- 1
								Pyrene	
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Pyridine	
						MS-IS_00013	20 uL	1,4-Dichlorobenzene-d4	
								Acenaphthene-d10	
								Chrysene-d12	
								Naphthalene-d8	
								Perylene-d12	40 ug/mL
			-				- 1		
.MS-HSLA_STK_00040	06/30/18	01/30/18	8   Methylene Chloride	ride, Lot	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
			10 T O T					ריזה בלתי להיא הני [ ח – 2	200 mg/mT.
								2-FIUOTODAPINAT	200 ug/IIII.
								Nitrobonzono_AR /Surr)	
								ile and	
								G	
							,	Terphenyl-d14 (Surr)	
							$\vdash$	Famphur	
							0.5 mL	Alachlor	200 ug/mL
						- 1		3,3'-Dichlorobenzidine	
						MS-569731 00070		Benzoic acid	
						MS-569732 HSL_00005	1 mL	Atrazine	200 ug/mL
								Caprolactam	200 ug/mL
						MS-571995_00001	2 mL	1,1'-Biphenyl	200 ug/mL
								1,2,4,5-Tetrachlorobenzene	
								1,2,4-Trichlorobenzene	200 ug/mL
								1,2-Dichlorobenzene	200 ug/mL
								1,2-Diphenylhydrazine	202.195 ug/mL
								1,3-Dichlorobenzene	200 ug/mL
								1,3-Dinitrobenzene	200 ug/mL
								1,4-Dichlorobenzene	200 ug/mL
								1,4-Dioxane	
								1-Methylnaphthalene	
								2,2'-oxybis[1-chloropropane]	200 ug/mL
								2,3,4,6-Tetrachlorophenol	
								2,4,5-Trichlorophenol	
								2,4,6-Trichlorophenol	200 ug/mL
-	-								

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

Exp Bate ID Date	Prep Date	Dilutant	Final	emii[oV]		
		Used	) H C H C H	Reagent ID Added	me ed Analyte	Concentration
					2,4-Dichlorophenol	200 ug/mL
					2,4-Dimethylphenol	
					2,4-Dinitrophenol	400 ug/mL
					2,4-Dinitrotoluene	200 ug/mL
					2,6-Dichlorophenol	200 ug/mL
					2,6-Dinitrotoluene	200 ug/mL
					2-Chloronaphthalene	200 ug/mL
					2-Chlorophenol	200 ug/mL
					2-Methylnaphthalene	
					2-Methylphenol	
					2-Nitroaniline	
					2-Nitrophenol	
					3 A Mother Charles	
					8 Z	
					3-Nicrodilitine	
						- 1
					4-bromophenyl phenyl ether	
					4-Chloro-3-methylphenol	700 nd/mT
						200
					4-CIITOLOPINENIAI PINENIAI ECHEL	200
					4-Nitronininie	
					4-NICPHENOI	
					Acenaphthene	
					Acenaphthylene	- 1
					Acetophenone	
					Aniline	200 ug/mL
					Anthracene	200 ug/mL
					Azobenzene	200 ug/mL
					Benzo[a]anthracene	200 ug/mL
					Benzo[a]pyrene	200 ug/mL
					Benzo[b]fluoranthene	200 ug/mL
					Benzo[g,h,i]perylene	200 ug/mL
					Benzo[k]fluoranthene	200 ug/mL
					Benzyl alcohol	200 ug/mL
					Bis (2-chloroethoxy) methane	200 ug/mL
					Bis (2-chloroethyl) ether	200 ug/mL
					Butyl benzyl phthalate	200 ug/mL
					Carbazole	200 ug/mL
					Chrysene	200 ug/mL
					Di-n-butyl phthalate	200 ug/mL
					Di-n-octvl phthalate	
					Dibenzofuran	
					Diethyl phthalate	
					Diphenylamine	170 ug/mL
					Fluoranthene	200 ug/mL
					Fluorene	200 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

(Purchased Reagent)					Reagent	Parent Reagent			
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A01273057 (Purchased Reagent) Restek, Lot A0127890 (Purchased Reagent) Restek, Lot A0127890 (Purchased Reagent) Restek, Lot A0127890 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)		Exp Date	Prep Date		Final Volume		Volume Added	Analyte	Concentration
Restek, Lot A0127668 Restek, Lot A0127668 Restek, Lot A0127677 Restek, Lot A0127472 Restek, Lot A0127819 Restek, Lot A0127800 Restek, Lot A012780 Restek, Lot A012780 Restek, Lot A012780 Restek, Lot A0127805 Restek, Lot A0127805 Restek, Lot A0127805								Hexachlorobenzene	200 ug/mL
Restek, Lot A0127668  Restek, Lot A0127668  Restek, Lot A0123057  Restek, Lot A0123057  Restek, Lot A012389  Restek, Lot A0125805								Hexachlorobutadiene	200 ug/mL
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0127472 (Purchased Reagent) Restek, Lot A012789 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Hexachlorocyclopentadiene	200 ug/mL
Restek, Lot A0130500  Restek, Lot A0127668  Restek, Lot A012787  Restek, Lot A0127819  Restek, Lot A012780  Restek, Lot A012805  Restek, Lot A012805								Indeno[1,2,3-cd]pyrene	200 ug/mL
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Isophorone	
Restek, Lot A0130500 (Purchased Reagent)  Restek, Lot A0127668 (Purchased Reagent)  Restek, Lot A0123057 (Purchased Reagent)  Restek, Lot A0123819 (Purchased Reagent)  Restek, Lot A012580 (Purchased Reagent)  Restek, Lot A012580 (Purchased Reagent)  Restek, Lot A0125805 (Purchased Reagent)								N-Nitrosodi-n-propylamine	
Restek, Lot A0130500 (Purchased Reagent)  Restek, Lot A0127668 (Purchased Reagent)  Restek, Lot A0123472 (Purchased Reagent)  Restek, Lot A0123805 (Purchased Reagent)  Restek, Lot A0125805 (Purchased Reagent)  Restek, Lot A0125805 (Purchased Reagent)  Restek, Lot A0125805 (Purchased Reagent)								N-Nitrosodimethylamine	200 ug/mL
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0133057 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								N-Nitrosodiphenylamine	
Restek, Lot A0130500 (Furchased Reagent) Restek, Lot A0127658 (Furchased Reagent) Restek, Lot A0127472 (Furchased Reagent) Restek, Lot A0123819 (Furchased Reagent) Restek, Lot A0125805 (Furchased Reagent) Restek, Lot A0125805 (Furchased Reagent) Restek, Lot A0125805 (Furchased Reagent)								Naphthalene	
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0127819 (Purchased Reagent) Restek, Lot A0127819 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent)								Nitrobenzene Pentachloronhenol	400 ug/mL
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A01233057 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Phenanthrene	200 ug/mL
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Phenol	
Restek, Lot A0130500 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A012319 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0123800 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Pyrene	
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								Pyridine	
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0133057 (Purchased Reagent) Restek, Lot A0127472 (Purchased Reagent) Restek, Lot A0127819 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)	Ĕ			Lot A0130			nt)		
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0123057 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0127580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								2-Fluorobiphenyl	
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0133057 (Purchased Reagent) Restek, Lot A0127819 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)									
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0133057 (Purchased Reagent) Restek, Lot A0127472 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A012780 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)									
Restek, Lot A0127668 (Purchased Reagent) Restek, Lot A0133057 (Purchased Reagent) Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A012580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)								ы	
Restek, Lot A012/000 (Furchased Reagent) Restek, Lot A0123819 (Furchased Reagent) Restek, Lot A0123819 (Furchased Reagent) Restek, Lot A0127580 (Furchased Reagent) Restek, Lot A0125805 (Furchased Reagent) Restek, Lot A0125805 (Furchased Reagent)		7		F +		- 1	- 1		2000 ug/mT
Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A012580 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)		03/31/19		TO+ A013			11.)	Fampint 37 = Ch 2 - Ch	
Restek, Lot A0123819 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent) Restek, Lot A0125805 (Purchased Reagent)		11/30/12		10+ 7012	+		7+)	3 2 - 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	2000 ug/mI
Restek, Lot A0125805 (Furchased Reagent)  Restek, Lot A0125805 (Purchased Reagent)		100/90		TO+ +01		- 1	11.7	Desired of a	
Restek, Lot A0125805 (Purchased Reagent)	- 1	11/30/18		Tot A0127		- 1	11.)	Delizorc acra	2000 ug/mT
Restek, Lot A0125805 (Purchased Reagent)	•	0 1 100 11 11 11		200			();	Caprolactam	
	Ť	91/30/30		T.O+ A0125			1+1	1 1 - Binhenss1	
1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,2'-oxybis[1-chloropane] 2,3,4,6-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dim	-	01/00/60		LOC AUIZO			10)	1.2.4.5-Tetrachlorobenzene	- 1
1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,2'-oxybis[1-chloropane] 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol								1,2,4-Trichlorobenzene	
1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloropenzene 2,2'-oxybis[1-chlorophenol 2,3,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dichlorophenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol								1,2-Dichlorobenzene	
1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dioxane 1,4								1,2-Diphenylhydrazine	1010.97 ug/mL
1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dioxane 1-Methylnaphthalene 2,2'-oxybis[1-chlorophenol 2,4,6-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,6-Dichlorophenol 2,6-Dichlorophenol								1,3-Dichlorobenzene	1000 ug/mL
1,4-Dichlorobenzene 1,4-Dioxane 1,4-Dioxane 1,4-Dioxane 1,2,1-cxybis[1-chloropane] 2,3,4,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,6-Dichlorophenol								1,3-Dinitrobenzene	
1,4-Dioxane  1-Methylnaphthalene 2,2'-oxybis[1-chloroprane] 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol								1,4-Dichlorobenzene	1000 ug/mL
1-Methylnaphthalene 2,2'-oxybis[1-chloroprane] 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimitrotoluene 2,4-Dimitrotoluene 2,4-Dimitrotoluene 2,6-Dichlorophenol								1,4-Dioxane	1000 ug/mL
2,2'-oxybis[1-chloropropane] 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4-Dichlorophenol 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol								1-Methylnaphthalene	
2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,6-Dichlorophenol								2,2'-oxybis[1-chloropropane]	1000 ug/mL
2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dinitrophenol 2,6-Dichlorophenol								2,3,4,6-Tetrachlorophenol	1000 ug/mL
2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,6-Dichlorophenol								2,4,5-Trichlorophenol	1000 ug/mL
2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,4-Dinitrotoluene								2,4,6-Trichlorophenol	1000 ug/mL
2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dichlorophenol								2,4-Dichlorophenol	1000 ug/mL
2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dichlorophenol								2,4-Dimethylphenol	1000 ug/mL
2,4-Dinitrotoluene 2,6-Dichlorophenol								2,4-Dinitrophenol	2000 ug/mL
[2,6-Dichloropheno]								2,4-Dinitrotoluene	1000 ug/mL
								2,6-Dichlorophenol	1000 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

2-Chlorophenol 1000 ug/mL 2-Chlorophenol 1000 ug/mL 1000 ug/mL 2-Chlorophenol 1000 ug/mL
Inloronaphthalene
MILO DINCHOH
2-Methylnaphthalene
2-Methylphenol
Z-Nitroaniline
& 4 Methylphenol
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl ether
4 CITACLO DINCCIIZADICIOA
4-Chlorophenyl phenyl ether
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Acetopnenone
Antitille
Azobenzene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene Renzvl alcohol
Bis (2-chloroethoxv) methane
Bis (2-chloroethyl)ether
Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
U1-n-butyl phthalate
Di-n-octyl phthalate
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Diphenylamine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno[1,2,3-cd]pyrene
Isophorone

Lab Name: TestAmerica Denver Job No.: 320-39023-1

SDG No.:

	Concentration	1000 ug/mL			1000 ug/mL	1000 ug/mL	2000 ug/mL			1000 ug/mL		400 ug/mL	400 mg/mT,					- 1	- 1					7m/bn 0007	10 ug/mL	10 ug/mL	10 ug/mL	10 ug/mL		10 ug/mL	10 ug/mL	20 ug/mL		10 ug/mL	10 ug/mL	10 ug/mL	10 ug/mL	10 ug/mL		10						10 ug/mL
	Analvte	N-Nitrosodi-n-propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Pentachlorophenol	Phenanthrene	Phenol	Pyrene	Pyridine	1,4-Dichlorobenzene-d4	Acenaphthene-d10	Chryspho-d12	Naphthaleneld8	Parvlana-d12	Phenanthrene-d10	1.4-Dichlorobenzene-d4	Acenaphthene-d10	Chrysene-d12	Namhthalonolds	Napilicia Telle - do	Perylene-diz	Fnenanthrene-dlU	2,4,6-Tribromophenol (Surr)	2-Fluorobiphenyl	2-Fluorophenol (Surr)	Nitrobenzene-d5 (Surr)		Alachlor	3,3'-Dichlorobenzidine	Benzoic acid	Atrazine	Caprolactam	1,1'-Biphenyl	1,2,4,5-Tetrachlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Diphenylhydrazine	1,3-Dichlorobenzene	1,3-Dinitrobenzene	1 4-Dichlorobenzene	1 A-Dioxana	1-Methylnanhthalene	2 21 - Company and process of a company of a	2,3,4,6-Tetrachlorophenol
	Volume											20 mL						n+)							25 uL																					
Parent Reagent	Reagent ID	- 1										MS-567684_00019						(Pirchased Reagent)							MS-HSLA_STK_00040																					
4	Reagent Final Volume											250 mL 1													0.5 mL																					
	Dilutant Used											Methylene Chloride, Lot	13/164					Restek Tot A0112833							Methylene Chloride, Lot																					
	Prep Date											06/22/17 N													04/03/18 N	1																				
	Exp Date											06/22/18 0						07/31/20	) H					-	06/22/18 0																					
	Reagent ID											.MS-IS_00013						MS-567684 00019	1						MS-HSLA010_00035																					

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Lab Name: TestAmerica Denver

SDG No.:

Reagent ID Date Date Date Reagent ID Date Reagent ID Date Date Reagent ID Date				+ 2 2 2 2	Parent Reagent			
	Exp Date	Prep Date	Dilutant Used	Final	Reagent ID	Volume Added	Analyte	Concentration
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	- 1
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
								10 ug/mL
							4-Chlorophenyl phenyl ether	- 1
							4-Nitroaniline	- 1
							4-Nitrophenol	- 1
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	- 1
							Anthracene	- 1
							Azobenzene	
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	
							benzo[b]iluorantnene	
							Benzolg, n, 1 jperylene	
							benzo[k]ıluorantnene	- 1
							Benzyl alconol Bis(2-ch]oroethown) methane	10 11g/mT.
							Dis (2 ciror de ciros y ) ine cirane Dis (2 ch ) exectival ) ether	10 kg/mil
							Bis(2-cmioecmy1) echel Bis(2-ethv1hexv1) phthalate	- 1
							1 (0	
							Chrysene	
							Di-n-butyl phthalate	
							Di-n-octyl phthalate	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	
							Dimethyl phthalate	
				_			Diphenylamine	8.5 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

				() () () ()	Parent Reagent	The state of the s		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	
							Hexachlorobutadiene	
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	
							Isophorone	
							N-Nitrosodi-n-propylamine	
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	
							Naphthalene	- 1
							Nitrobenzene	- 1
							Pentachlorophenol	
							Phenanthrene	- 1
							Phenol	- 1
							Pyrene	10 ug/mL
							Pyridine	
					MS-IS_00013	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00040	06/30/18	01/30/18	Methylene Chloride, Lot	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
			181343				2-Fluorobiphenvl	200 ug/mL
							2-Fluorophenol (Surr)	
							LC.	
							Terphenyl-d14 (Surr)	
					MS-568023 00042	1 mL	Famphur	200 ug/mL
				'	MS-568033 00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730 HSL 00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
						2 mL	Benzoic acid	400 ug/mL
					MS-569732 HSL_00005	1 mL	Atrazine	
							Caprolactam	
					MS-571995_00001	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	
						·	1,2,4-Trichlorobenzene	
							1,2-Dichlorobenzene	200
							1,2-Diphenylhydrazine	
							1,3-Dichlorobenzene	
							1,3-Dinitrobenzene	- 1
							1,4-Dichlorobenzene	
							1,4-Dloxane	
							1-Metnyinaphthaiene	700 ng/mr
_	_	_	_	_			Z -OXYDIS[I-CIIIOLOPIOPAIIE]	TIII / 6 n 0 0 7

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

SDG No.:

ng/mL ng/mL ng/mL ng/mL ng/mL ng/mL 200 ug/mL ng/mL ng/mL ng/mL 200 ug/mL 200 ug/mL Concentration 200 ug/mL ng/mL ng/mL 200 ug/mL 200 ug/mL ng/mL 200 ug/mL 200 ug/mL 200 ug/mL 400 ug/mL 200 ug/mL :00 ug/mL 400 ug/mL 200 Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Benzyl alcohol
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether Bis(2-ethylhexyl) phthalate Butyl benzyl phthalate Carbazole Chrysene ether 4-Bromophenyl phenyl ether 4,6-Dinitro-2-methylphenol 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 4-Chloro-3-methylphenol 4-Chlorophenyl phenyl Benzo[a]pyrene Benzo[b]fluoranthene 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dichlorophenol -Methylnaphthalene 2-Chloronaphthalene Analyte Azobenzene Benzo[a]anthracene 2,6-Dinitrotoluene 3 & 4 Methylphenol 4-Chloroaniline 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Acenaphthylene 2-Methylphenol 2-Chloropheno] 2-Nitrophenol 4-Nitrophenol Acenaphthene Acetophenone Anthracene Aniline Volume Added Parent Reagent Reagent ID Reagent Volume Final Dilutant Used Prep Date Exp Date Reagent ID

#### Page 243 of 3863

ng/mL

200 ug/mL ng/mL 200 ug/mL 200 ug/mL ng/mL 200 ug/mL

Di-n-octyl phthalate Dibenz (a,h) anthracene

Dibenzofuran Diethyl phthalate Dimethyl phthalate

Di-n-butyl phthalate

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

ID Added
30,000
Dipilenylamine
Fluoranthene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno[1,2,3-cd]pyrene
N-Nitrosodi-n-propylamine
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
Naphthalene
Nitrobenzene
Pentachlorophenol
Frenanchrene
Phenol
Pyrelle Dividing
Pirchaeod Boacont)
sed reagent)
Z-FIGOLODIPINEII
Nitrobenzene-d5
10 T C T C T C T C T C T C T C T C T C T
Terphenyl-d14 (Surr)
(Purchased Reagent) Famphur
(Purchased Reagent) 3,3'-Dichlorobenzidine
(Purchased Reagent) Benzoic acid
(Purchased Reagent) Atrazine
(Purchased Reagent) 1,1'-Biphenyl
1,2,4,5-Tetrachlorobenzene
1,2-Dichlorobenzene
1,2-Diphenylhydrazine
1,3-Dichlorobenzene
1,3-Dinitrobenzene
1,4-Dichlorobenzene
1,4-Dioxane
1-Methylnaphthalene
2,2'-oxybis[1-chloropropane
2,3,4,6-Tetrachlorophenol
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol

Lab Name: TestAmerica Denver Job No.: 320-39023-1

Duce   Duce   Duce   Tollarant   Volume   Reagent 12   Added				4 0 0 0	Parent Reagent		
1000 1000	Exp Date	Prep Date	Dilutant Used	Final Volume	QH	Analyte	Concentration
1000 1000 1000 1000 1000 1000 1000 1000 er 1000 te 1000 te 1000						2,4-Dinitrotoluene	1000 ug/mL
1000 1000						2,6-Dichlorophenol	
er 1000 100						2,6-Dinitrotoluene	1000 ug/mL
1000 1000						2-Chloronaphthalene	1000 ug/mL
1000 1000						2-Chlorophenol	1000 ug/mL
1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 te 1000 100						2-Methylnaphthalene	
1000   1000 						2-Methylphenol	1000 ug/mL
er 1000 1000 1000 1000 1000 1000 1000 1000 te 1000 te 1000 100						2-Nitroaniline	1000 ug/mL
er 1000 er 1000 er 1000 1000 1000 1000 te 1000 te 1000 te 1000						2-Nitrophenol	
er 1000 1000 er 1000 1000 1000 1000 1000 te 1000 te 1000 te 1000 100						3 & 4 Methylphenol	1000 ug/mL
er 1000 er 1000 1000 1000 1000 1000 1000 te 1000 te 1000 te 1000 100						3-Nitroaniline	1000 ug/mL
er 1000 1000 2000 2000 2000 1000 1000 1000 te 1000 te 1000 te 1000						4,6-Dinitro-2-methylphenol	2000 ug/mL
er 1000 1000 1000 1000 1000 1000 1000 1000 te 1000 te 1000 100						4-Bromophenyl phenyl ether	1000 ug/mL
er 1000 1000 1000 1000 1000 1000 1000 te 1000 te 1000 100						4-Chloro-3-methylphenol	1000 ug/mL
er 1000 1000 1000 1000 1000 1000 1000 1000 te 1000 te 1000 100						4-Chloroaniline	1000 ug/mL
1000 1000						phenyl	
2000 1000 1000 1000 1000 1000 1000 1000						4-Nitroaniline	
1000 1000						4-Nitrophenol	2000 ug/mL
1000 1000						Acenaphthene	1000 ug/mL
1000 1000						Acenaphthylene	1000 ug/mL
1000 1000						Acetophenone	
te 1000 te 1000 te 1000 te 1000						Aniline	
1000 1000 1000 1000 1000 1000 te 1000 100						Anthracene	1000 ug/mL
te 1000 te 1000 te 1000 te 1000						Azobenzene	1000 ug/mL
te 1000 te 1000 te 1000 100						Benzo[a]anthracene	1000 ug/mL
te 1000 te 1000						Benzo[a]pyrene	
te 1000 te 1000 te 1000 100						Benzo[b]fluoranthene	
te 1000 te 1000						Benzo[g,h,i]perylene	
te 1000 100						Benzo[k]fluoranthene	1000 ug/mL
te 1000 100						Benzyl alcohol	1000 ug/mL
te 1000 1000 1000 1000 1000 1000 1000 100						Bis(2-chloroethoxy)methane	1000 ug/mL
te 1000 1000 1000 1000 1000 1000 1000 100						Bis (2-chloroethyl)ether	
1000 1000 1000 1000 1000 1000 1000 100						Bis(2-ethylhexyl) phthalate	1000 ug/mL
1000 1000 1000 1000 1000 1000 1000 100						Butyl benzyl phthalate	1000 ug/mL
1000 1000 1000 1000 1000 850 850 1000 100						Carbazole	
1000 1000 1000 1000 1000 1000 1000 100							
1000 1000 1000 1000 1000 1000 1000							
1000 1000 1000 1000 1000 1000 1000							1000 ug/mL
1000 1000 1000 850 1000 1000 1000						Dibenz (a, h) anthracene	1000 ug/mL
1000 1000 850 1000 1000 1000						Dibenzofuran	1000 ug/mL
1000 850 1000 1000 1000 1000						Diethyl phthalate	
1000 1000 1000 1000						Dimethyl phthalate	
10000						Diphenylamine	
1000						Fluoranthene	
1000						Fluorene	1000 ug/mL
1000						Hexachlorobenzene	1000 ug/mL
						Hexachlorobutadiene	1000 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

				Reagent	Farent Keagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID A	Volume Added Analyte	Concentration
						Hexachloroethane	1000 ug/mL
		_				Indeno[1,2,3-cd]pyrene	
		_				Isophorone	1000 ug/mL
						N-Nitrosodi-n-propylamine	
		_				N-Nitrosodimethylamine	1000 ug/mL
						N-Nitrosodiphenylamine	1000 ug/mL
		_				Naphthalene	1000 ug/mL
						Nitrobenzene	1000 ug/mL
		_				Pentachlorophenol	2000 ug/mL
						Phenanthrene	1000 ug/mL
						Phenol	1000 ug/mL
						Pyrene	
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019	50 mL 1,4-Dichlorobenzene-d4	400 ug/mL
			157164			\range\tau\+\range\tau\d\1\	400 11g/mT.
						Chrysene_412	400 ug/mT.
						Naphthalene-d8	400 ug/mL
						Perylene-d12	
						Phenanthrene-d10	
MS-567684 00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		
						Acenaphthene-d10	2000 ug/mL
						Chrysene-d12	2000 ug/mL
		_				Naphthalene-d8	2000 ug/mL
						Perylene-d12	2000 ug/mL
						Phenanthrene-d10	2000 ug/mL
MS-HSLA020_00035	06/22/18	04/03/18	Methylene Chloride, Lot 181545	0.5 mL	MS-HSLA_STK_00040	50 uL 2,4,6-Tribromophenol (Surr)	20 ug/mL
						2-Fluorobiphenyl	20 ug/mL
						2-Fluorophenol (Surr)	20 ug/mL
						Nitrobenzene-d5 (Surr)	20 ug/mL
						Ы	
						Terphenyl-d14 (Surr)	
						Famphur.	Z0 ug/mL
						3.3'-Dichlorobenzidine	
						Benzoic acid	
						Atrazine	
						Caprolactam	20 ug/mL
						1,1'-Biphenyl	
						1,2,4,5-Tetrachlorobenzene	20 ug/mL
						1,2,4-Trichlorobenzene	20 ug/mL
						1,2-Dichlorobenzene	
						1,2-Diphenylhydrazine	20.2195 ug/mL
						1,3-Dichlorobenzene	20 ug/mL
						1,3-Dinitrobenzene	
						1,4-Dichlorobenzene	
_	_			_		l,4-Dioxane	ZO ng/mr

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Lab Name: TestAmerica Denver

SDG No.:

			Reagent	Parent Reagent			
Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
						1-Methylnaphthalene	20 ug/mL
						2,2'-oxybis[1-chloropropane]	20 ug/mL
						2,3,4,6-Tetrachlorophenol	
						2,4,5-Trichlorophenol	
						2,4,6-Trichlorophenol	20 ug/mL
						2,4-Dichlorophenol	20 ug/mL
						2,4-Dimethylphenol	20 ug/mL
						2,4-Dinitrophenol	
						2,4-Dinitrotoluene	
						2,6-Dichlorophenol	20 ug/mL
						2,6-Dinitrotoluene	20 ug/mL
						2-Chloronaphthalene	20 ug/mL
						2-Chlorophenol	
						2-Methylnaphthalene	20 ug/mL
						2-Methylphenol	20 ug/mL
						2-Nitroaniline	20 ug/mL
						2-Nitrophenol	
						3 & 4 Methylphenol	20 ug/mL
						3-Nitroaniline	20 ug/mL
						4,6-Dinitro-2-methylphenol	40 ug/mL
						4-Bromophenyl phenyl ether	
						4-Chloro-3-methylphenol	20 ug/mL
						4-Chloroaniline	20 ug/mL
						4-Chlorophenyl phenyl ether	20 ug/mL
						1	
						4-Nitrophenol	40 ug/mL
						Acenaphthene	
						Acenaphthylene	
						Acetophenone	
						Aniline	
						Anthracene	
						Azobenzene	20 ug/mL
						Benzo[a]anthracene	20 ug/mL
						Benzo[a]pyrene	20 ug/mL
						Benzo[b]fluoranthene	20 ug/mL
						Benzo[g,h,i]perylene	20 ug/mL
						Benzo[k]fluoranthene	20 ug/mL
						Benzyl alcohol	20 ug/mL
						Bis (2-chloroethoxy) methane	20 ug/mL
						Bis (2-chloroethyl) ether	20 ug/mL
						Bis (2-ethylhexyl) phthalate	20 ug/mL
						10	
						Carbazole	20 ug/mL
						Chrysene	
						Di-n-butyl phthalate	20 ug/mL
						Di-n-octyl phthalate	20 ug/mL
						Dibenz (a,h) anthracene	
						Dibenzofuran	20 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

				() () () ()	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	
							Diphenylamine	
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	
							Hexachloroethane	
							Indeno[1,2,3-cd]pyrene	
							Isophorone	
							N-Nitrosodi-n-propylamine	
							N-Nitrosodimethylamine	
							N-Nitrosodiphenylamine	
							Naphthalene	
							Nitrobenzene	
							Pentachlorophenol	
							Phenanthrene	
							Phenol	
							Pyrene	
						- 1	Pyridine	
					MS-IS_00013	50 uL	1,4-Dichlorobenzene-d4	- 1
							Acenaphthene-d10	- 1
							Chrysene-d12	- 1
							Naphthalene-d8	- 1
							Perylene-d12	- 1
						- 1		- 1
.MS-HSLA_STK_00040	06/30/18	01/30/18	Methylene Chloride, Lot 181545	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
			) 1 1 1 1				2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5 (Surr)	200 ug/mL
							Phenol-d5 (Surr)	
							Terphenyl-d14 (Surr)	200 ug/mL
						$\vdash$		
					0000	0.5 mL	- 1	
					MS-569730 HSL 00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731 00070	- 1	Benzoic acid	
					MS-569732 HSL_00005	1 mL	Atrazine	
							Caprolactam	
					MS-571995_00001	2 mL	1,1'-Biphenyl	
							1,2,4,5-Tetrachlorobenzene	
							1,2,4-Trichiorobenzene	
							1,2-Dichlorobenzene	
							1,2-Diphenylhydrazine	
							1,3-Dichlorobenzene	
							1,3-Dinitrobenzene	
_	_		_	_	_		1,4-Dichlorobenzene	7m/gn noz

Lab Name: TestAmerica Denver

SDG No.:

Nolume				7 0 0 1	Parent Reagent		
200 200 200 200 200 200 200 200	Exp Date	Prep Date	Dilutant Used	Final	ID		Concentration
E   200						1,4-Dioxane	200 ug/mL
E   200   20						1-Methylnaphthalene	200 ug/mL
200 200 200 200 200 200 200 200						2,2'-oxybis[1-chloropropane]	200 ug/mL
200 200 200 200 200 200 200 200						2, 3, 4, 6-Tetrachlorophenol	200 ug/mL
200 200 200 200 200 200 200 200						2,4,5-Trichlorophenol	
200 200 200 200 200 200 200 200						2,4,6-Trichlorophenol	
200 200 200 200 200 200 200 200						2,4-Dichlorophenol	
4 400 5 200 5 200 5 200 6 2 200 6 2 200 6 2 200 6 2 200 7 2 200 7 2 200 8 2 200 8 2 200 9						2,4-Dimethvlphenol	
200 200 200 200 200 200 200 200 200 200						2.4-Dinitrophenol	400 ug/mL
200 200 200 200 200 200 200 200 200 200						2.4-Dinitrotoluene	
200 200 200 200 200 200 200 200 200 200						2.6-Dichlorophenol	
200 200 200 200 200 200 200 200 200 200						2.6-Dinitrotoluene	
200 200 200 200 200 200 200 200 200 200						2-Chloronaphthalene	200 ag/m
200 200 200 200 200 200 200 200						2-Chlorophenol	200 ug/mL
T 200 200 200 200 200 200 200 200						2-Methylnaphthalene	
T 200 200 200 200 200 200 200 200						2-Methylphenol	200 ag/mT,
E 200 200 200 200 200 200 200 200						2-Nitroaniline	
200 200 200 200 200 200 200 200 200 200						2-Nitrophenol	
200 400 400 200 200 200 200 200						3 & 4 Methylphenol	
400 200 200 200 200 200 200 200						3-Nitroaniline	
200 200 200 200 200 200 200 200 200 200						4,6-Dinitro-2-methylphenol	
2000 2000 2000 2000 2000 2000 2000 200						4-Bromophenvl phenvl ether	
200 200 200 200 200 200 200 200						4-Chloro-3-methylphenol	
200 200 6 200 6 200 6 200 6 200 7 20						4-Chloroaniline	
200 200 200 200 200 200 200 200 200 200						phenyl	200 ug/mL
400 200 200 200 200 200 200 200						4	
200 200 200 200 200 200 200 200 200 200						4-Nitrophenol	
200 200 200 200 200 200 200 200 200 200						Acenaphthene	
200 200 200 200 200 200 200 200 200 200						Acenaphthylene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Acetophenone	
200 200 200 200 200 200 200 200 200 200						Aniline	
200 200 200 200 200 200 200 200 200 200						Anthracene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Azobenzene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Benzo[a]anthracene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Benzo[a]pyrene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Benzo[b]fluoranthene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Benzo[g,h,i]perylene	200 ug/mL
200 200 200 200 200 200 200 200 200 200						Benzo[k]fluoranthene	
200 200 200 200 200 200 200 200 200 200						Benzyl alcohol	200 ug/mL
er 200 halate 200 e 200 200 200 200 200 200						Bis (2-chloroethoxy) methane	200 ug/mL
e 200 e 200 200 200 200 200 200 200						Bis (2-chloroethyl) ether	200 ug/mL
200 200 200 200 200 200 200						Bis(2-ethylhexyl) phthalate	200 ug/mL
200							200 ug/mL
200						Carbazole	200 ug/mL
200						Chrysene	200 ug/mL
200						Di-n-butyl phthalate	
200						Di-n-octyl phthalate	200 ug/mL
						Dibenz (a, h) anthracene	200 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

Paragraph   Date   Da					Δ	Darent Readent		
Date			1			- 1		
11/30/19   Resteb, Lot A012169   Purchased Respent)   12/30/20   Resteb, Lot A012169   Purchased Respent)   Respent   Respent		Exp Date	Prep Date			QI		Concentration
District Light Light Light Continue   District Light Light Continue   District Light Light Continue   District Light Con							Dibenzofuran	
Directly   Directly							Diethyl phthalate	
Principle   Prin							Dimethyl phthalate	
							Diphenylamine	
Place   Plac							Fluoranthene	
Hexachicrotoxicalized   Hexachicrotoxicalized   Hexachicrotoxicalized   Hexachicrotoxicalized   Hexachicrotoxicalized   200							Fluorene	
Macachicacceconstantial							Hexachlorobenzene	
Hexachlocockippenicaliene   200							Hexachlorobutadiene	
Harden   H							Hexachlorocyclopentadiene	
Trichester   Tri							Hexachloroethane	200 ug/mL
Supplement   Sup							Indeno[1,2,3-cd]pyrene	200 ug/mL
N. Nitrosodinetpylamine 200   N. N							Isophorone	
N. N. trosediphentlane   200							N-Nitrosodi-n-propylamine	
Naphthalene   200							N-Nitrosodimethylamine	
National Computation   National Computational							N-Nitrosodiphenylamine	
Nutrobensence   200   Pentachlorophenol   200							Naphthalene	200 ug/mL
Percanthrene   200   Phenanthrene   200   Phenant							Nitrobenzene	200 ug/mL
Phenoalthrene   200							Pentachlorophenol	400 ug/mL
Phenol							Phenanthrene	
Pyreidine							Phenol	
1/30/19							Pyrene	
01/30/19   Restek, Lot A0130500   Purchased Reagent)   24,6-Tribromophenol (Surr)   5000   2-Filosophenol (Surr)   5000   2000   2-Filosophenol (Surr)   5000   2000   2-Filosophenol (Surr)   5000   2000							Pyridine	
C=Fluorobiphenyl   5000   Nitrobenzene-d5 (Surr)   Surrobenzene-d5 (Surr)   Surrobenzene-d5 (Surrobenzene-d5 (Surrobenzene-	MS-567685 00004	01/30/19		Lot A0130	(Pur	chased Reagent)		
Terphenol-dis (Surr)   5000	ı				-			
NitrobenZene-d5 (Surr)							2-Fluorophenol (Surr)	
Phenol-d5 (Surr)   5000								
11/30/19								
11/30/19   Restek, Lot A0127668   (Purchased Reagent)   Alachlor   2000     10/30/19   Restek, Lot A0123819   (Purchased Reagent)   3,3-Dichlorobenzidine   2000     10/30/18   Restek, Lot A0123819   (Purchased Reagent)   Benzoic acid   2000     10/30/18   Restek, Lot A0127880   (Purchased Reagent)   Atazine   2000     11/30/18   Restek, Lot A0125805   (Purchased Reagent)   1,1-Biphenyl   2000     10/30/18   Restek, Lot A0125805   (Purchased Reagent)   1,2-4-Fretrachlorobenzene   1000     1,2-4-Fretrachlorobenzene   1000     1,2-bichlorobenzene   1000     1,3-Dichlorobenzene   1000     1,3-Dichlorobenzene   1000     1,3-Dichlorobenzene   1000     1,3-Dichlorobenzene   1000     1,3-Dichlorobenzene   1000     1,4-Dickloropenzene   1000								
11/30/18   Restek, Lot A0133057   (Purchased Reagent)   Alachlor   2000   200		_		Lot A0127	(Pur		Famphur	
11/30/18   Restek, Lot A0127472   Purchased Reagent)   3,3'-Dichlorobenzidine   2000		06/30/19		Lot A0133	(Pur		Alachlor	
Matter   M		/30/		Lot A0127	(Pur		3,3'-Dichlorobenzidine	
11/30/18   Restek, Lot A0127580   Purchased Reagent)	MS-569731_00070	06/30/18		Lot A0123	(Pur		Benzoic acid	
Caprolactam   Caprolactam   2000	MS-569732 HSL_00005	11/30/18		Lot A0127	Ind)		Atrazine	
1,1'-Biphenyl   1,000							Caprolactam	
1000 1010.97 1010.97 1000 1000 1000 1000 1000 1000 1000 10	MS-571995_00001	09/30/18		Lot A0125	(Pur		1,1'-Biphenyl	
1000 1010.97 1010.97 1000 1000 1000 1000 1000 1000 1000							1,2,4,5-Tetrachlorobenzene	
1010.97 1010.97 1000 1000 1000 1000 1000 1000 1000 10							1,2,4-Trichlorobenzene	
1010.97 1000 1000 1000 1000 1000 1000 1000 10							1,2-Dichlorobenzene	- 1
10000							1,2-Diphenylhydrazine	- 1
10000							1,3-Dichlorobenzene	1000 ug/mL
1000 1000 1000 1000 1000 1000 1000							1,3-Dinitrobenzene	
1000 1000 1000 1000 1000 1000							1,4-Dichlorobenzene	
1000							1,4-Dioxane	
1000							1-Methylnaphthalene	
enol 1000 1000 1000							2,2'-oxybis[1-chloropropane]	
1000							2,3,4,6-Tetrachlorophenol	
1000							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 320-39023-1

				7 0 0 0 0	Parent Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final	Nolume Reagent ID Added	me ed Analyte	Concentration
						2,4-Dichlorophenol	1000 ug/mL
						2,4-Dimethylphenol	
						2,4-Dinitrophenol	2000 ug/mL
						2,4-Dinitrotoluene	1000 ug/mL
						2,6-Dichlorophenol	1000 ug/mL
						2,6-Dinitrotoluene	
						2-Chloronaphthalene	1000 ug/mL
						2-Chlorophenol	1000 ug/mL
						2-Methylnaphthalene	1000 ug/mL
						2-Methylphenol	1000 ug/mL
						2-Nitroaniline	1000 ug/mL
						2-Nitrophenol	1000 ug/mL
						3 & 4 Methylphenol	1000 ug/mL
						3-Nitroaniline	
						4,6-Dinitro-2-methylphenol	
						4-Bromophenyl phenyl ether	
						4-Chioro-3-metnyiphenoi	1000 ug/mL
						4 Chlorophanyl phanyl athar	1000 ug/mI.
						Piiciiy	
						4 N1 C1 CAILLILIG	
						A NITCLOPHICHOI	
						Acenaphthylene	
						Acetophenone	
						Aniline	
						Anthracene	1000 ug/mL
						Azobenzene	1000 ug/mL
						Benzo[a]anthracene	1000 ug/mL
						Benzo[a]pyrene	
						Benzo[b]fluoranthene	
						Benzo[g,h,i]perylene	
						Benzo[k]fluoranthene	
						Benzyl alcohol	1000 ug/mL
						Bis (2-chloroethoxy) methane	1000 ug/mL
						Bis (2-chloroethyl) ether	- 1
						Butyl benzyl phthalate	
						Carbazole	
						Chrysene	1000 ug/mL
						Di-n-butyl phthalate	
						Di-n-octyl phthalate	
						Dibenz (a, h) anthracene	- 1
						Dibenzofuran	1000 ug/mL
						Diethyl phthalate	1000 ug/mL
						Dimethyl phthalate	
						Diphenylamine	
						Fluoranthene	1000 ug/mL
						Fluorene	1000 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

					Darent Readent			
	E	Д 4 7 7	+:[.[.	Reagent Final		omii[OV		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ng/mL
							Hexachlorocyclopentadiene	
							Hexachloroethane	1000 ng/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	
							Naphthalene	
							Nitrobenzene	
							Pentachlorophenol	
							Phenanthrene	
							Phenol	
							Pyrene	
C C C C C C C C C C C C C C C C C C C		1		1	0777	F C L	_	
. Maria (1000 ta	06/22/18	11/77/90	Metnylene Chioride, Lot 157164	TW 067	MS-36/684 00019 -	7W 0.0	1,4-Dichiorobenzene-04	400 ug/mr
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ng/mL
							Phenanthrene-d10	400 ug/mL
MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	nt)	1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA050_00036	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-HSLA_STK_00040	125 uL	2,4,6-Tribromophenol (Surr)	50 ug/mL
			181545				2-Fluorobiphenvl	50 ug/mL
							2-Fluorophenol (Surr)	
							Nitrobenzene-d5 (Surr)	
							Phenol-d5 (Surr)	20 ng/mL
							Terphenyl-d14 (Surr)	50 ug/mL
							Famphur	
							Alachlor	
							3,3'-Dichlorobenzidine	20 ng/mL
							Benzoic acid	
							Atrazine	
							Caprolactam	50 ug/mL
							1 2 4 5-metrachlorobensene	30 ug/mL
							1.2.4-Trichlorobenzene	
							1,2-Dichlorobenzene	
							1,2-Diphenylhydrazine	50.5487 ug/mL
							1,3-Dichlorobenzene	
_	_	_		_	-			-

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Lab Name: TestAmerica Denver

SDG No.:

				1 2 0 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							1,3-Dinitrobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	
							1-Methylnaphthalene	
							2,2'-oxybis[1-chloropropane]	50 ug/mL
							2, 3, 4, 6-Tetrachlorophenol	50 ug/mL
							2,4,5-Trichlorophenol	
							2,4,6-Trichlorophenol	
							2,4-Dichlorophenol	
							2,4-Dimethylphenol	50 ug/mL
							2,4-Dinitrophenol	
							2,4-Dinitrotoluene	
							2,6-Dichlorophenol	- 1
							2, b-Dinitrotoluene	
							Z-Chloronaphthalene	7m/mT
							2-CIIIOIODIIEIIOI 2-Mathwlnanhthalana	Jm / ptr 03
							2 Methylphenol	
							2-Nitroaniline	
							2-Nitrophenol	
							3 & 4 Methylphenol	
							3-Nitroaniline	50 ug/mL
							4,6-Dinitro-2-methylphenol	
							4-Bromophenyl phenyl ether	50 ug/mL
							4-Chloro-3-methylphenol	
							4-Chloroaniline	
							4-Chlorophenyl phenyl ether	50 ug/mL
							4-Nitroaniline	50 ug/mL
							4-Nitrophenol	100 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	
							Acetophenone	- 1
							Aniline	
							Anthracene	
							Azobenzene	50 ug/mL
							Benzo[a]anthracene	
							Benzo[a]pyrene	- 1
							Benzo[b]fluoranthene	- 1
							Benzo[g,h,i]perylene	
							Benzo[k]fluoranthene	50 ug/mL
							Benzyl alcohol	
							Bis(2-chloroethoxy)methane	
							$\overline{}$	50 ug/mL
							Bis (2-ethylhexyl) phthalate	50 ug/mL
							Butyl benzyl phthalate	50 ug/mL
							Carbazole	
							- 1	- 1
	_		_	_			Di-n-butyl phthalate	20 ng/mL

Lab Name: TestAmerica Denver

SDG No.:

Note					Д У У	Parent Reagent			
Dispute to the price of the property of the		Exp Date	Prep Date	Dilutant Used	Final Volume		Volume Added	Analyte	Concentration
STREET   S								Di-n-octyl phthalate	50 ug/mL
Signature   Sign								Dibenz (a, h) anthracene	50 ug/mL
SizeWith Intelligence   Size								Dibenzofuran	
District Partial are   Signature   District Partial are   Signature   Signat								Diethyl phthalate	
ElighentyLearthene   92								Dimethyl phthalate	
Pictores								Diphenylamine	42.5 ug/mL
### STATE CONTINUES OF THE PRESENCE OF THE PRE								Fluoranthene	50 ug/mL
State   Stat								Fluorene	
State   Stat								Hexachlorobenzene	
STIKE_00040   STIKE_00014								Hexachlorobutadiene	
Tiddeno[1,2,3-cdthate=								Hexachlorocyclopentadiene	
Inspheron   Inspheron   Frequency   Expheron   Expheron   50								Hexachloroethane	
New Introduction								Indeno[1,2,3-cd]pyrene	
Nature   Nation   N								Isophorone	
N=Nitrosodipherblylamine   So								N-Nitrosodi-n-propylamine	
STR_00040   OF/30/18   Methylene Chloride, Lot   Nar-58023 00042   M. Choesene   50   Methylene Chloride, Lot   Nar-58023 00042   M. Choesene   50   M. Choesene								N-Nitrosodimethylamine	
Nighthalene   So								N-Nitrosodiphenylamine	
Nitrobenzence   So								Naphthalene	
STK_00040   06/30/18   01/30/18   Wethylene Chloride, Lot   10 mL MS-567685_00004   1 mL MS-15.00013   1 mL Trobenzene-d4   40   1 mL MS-56788_030004   1 mL Trobenzene-d3   40   40   1 mL Trobenzene-d3   40   40   40   40   40   40   40   4								Nitrobenzene	
Phenol there								Pentachlorophenol	
Prench   P								Phenanthrene	
Fytein								Phenol	
NS-IS_00013   STK_00040   O6/30/18   O1/30/18   Methylene Chloride, Lot   Lo mL   MS-567685_00004   O.4 mL   L/4-Dichlorobenzene-d4   40   Ochoration   Ochorat								Pyrene	
STK_00040   06/30/18   MS-IS_00013   SO UL   14-Dichlorobenzene-d4   40   40   Aceaphthene-d10   Achamathy					'			Pyridine	
STK_00040   06/30/18   01/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   2.4.6-Tribromophenol (Surr)   200   Phenol Chloride   200   200   Phenol Chloride   200   200   Phenol Chloride   200   200   Phenol Chloride   200						MS-IS_00013		1,4-Dichlorobenzene-d4	
STR_00040   06/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   2.4.6-Tribromophenol (Surr)   200   Nitrobenzene-d5 (Surr)   200   Nitrobenzene   200   Nitrobenze								Acenaphthene-d10	
STK_00040   06/30/18   01/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   2,4,6-Tribromophenol (Surr)   200   2-Fluorobiphenyl   2-Fluorobi								Chrysene-d12	- 1
STK_00040   06/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   2,4,6-Tribromophenol (Surr)   200								Naphthalene-d8	
STK_00040         06/30/18         Methylene Chloride, Lot         10 mL         MS-567685_00004         0.4 mL         2,4,6-Tribromophenol (Surr)         200           2-Fluorobjphenyl         2-Fluorophenol (Surr)         200           3-Fluorophenol (Surr)         200           Nitrobenezene-d5 (Surr)         200           Phenol-d5 (Surr)         200           NS-56803 00026         0.5 mL         Alachor           MS-56803 00026         0.5 mL         Alachor         200           MS-569730 HSL 00007         1 mL         Alachor         200           MS-569731 00070         2 mL         Alachor         200           MS-509731 00070         2 mL         Alachor         200								Perylene-d12	
STK_00040   06/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   2,4,6-Tribromophenol (Surr)   200									
Action	STK	06/30/18	01/30/18	Methylene Chloride, 181545	10	MS-567685_00004			
Nitrobenzene-d5 (Surr)   200								2-Fluorobiphenyl	
Nitrobenzene-d5 (Surr)   200									
Phenol-d5 (Surr)   200   Terphenyl-d14 (Surr)   200   Terphenyl-d14 (Surr)   200									
Terphenyl-d14 (Surr)   200								(Sur	
mL Famphur 200   0.5 mL Alachlor   200   200   3.3'-Dichlorobenzidine   200   200   2 mL Benzoic acid   200   2 mL Atrazine   200   2 mL Atrazine   200   2 mL Atrazine   200   2 mL Atrazine   200   2 mL Atrachlorobenzene   200   1,2,4-Trichlorobenzene   200   1,2,4-Trichlorobenzene   200   1,2,4-Trichlorobenzene   200   1,2-Dichlorobenzene   200   20								yl-d14	
0.5 mL Alachlor 0007 1 mL 3.3'-Dichlorobenzidine 200 0005 1 mL Benzoic acid 400 0005 1 mL Arazine 200 0 Caprolactam 200 2 mL 11'-Biphenyl 200 1,2,4,5-Tetrachlorobenzene 200 1,2,4-Trichlorobenzene 200 1,2,4-Trichlorobenzene 200								Famphur	
ML   3,3'-Dichlorobenzidine   200								_	
2 mL Benzoic acid 400 0005 1 mL Atrazine 200 Caprolactam 200 2 mL 1,1'-Biphenyl 200 1,2,4,5-Tetrachlorobenzene 200 1,2,4-Trichlorobenzene 200 1,2,4-Trichlorobenzene 200								3,3'-Dichlorobenzidine	200 ug/mL
0005								Benzoic acid	400 ug/mL
Caprolactam  2 mL 1,1'-Biphenyl 1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene								Atrazine	
2 mL 1,1'-Biphenyl 1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene								Caprolactam	
nzene						MS-571995_00001		1,1'-Biphenyl	
Φ								1,2,4,5-Tetrachlorobenzene	200 ug/mL
200								1,2,4-Trichlorobenzene	200 ug/mL
								1,2-Dichlorobenzene	200 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Exp Bagent ID Date	ЩЦ	Prep Date	Dilutant Used	Final		Volume		
		)		volume	Reagent ID	Added	Analyte	Concentration
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	
							1-Methylnaphthalene	
							2,2'-oxybis[1-chloropropane]	
							2,3,4,6-Tetrachlorophenol	
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	
							2,4-Dichlorophenol	
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	
							2,4-Dinitrotoluene	
							2,6-Dichlorophenol	
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	
							2-Methylphenol	
							2-Nitroaniline	200 ug/mL
						•	2-Nitrophenol	
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							(I)	200 ug/mL
							4-Chlorophenyl phenyl ether	
							4-Nitroaniline	
						•	4-Nitrophenol	400 ng/mI
						•	Acenaphthene	
							Acenaphthylene	
							Acetophenone	
							Aniline	
						•	Anthracene	200 ug/mL
						•	Azobenzene	200 ug/mL
						•	Benzo[a]anthracene	
						•	Benzo[a]pyrene	
							Benzo[b]fluoranthene	
						•	Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	
							Benzyl alcohol	
							Bis (2-chloroethoxy) methane	200 ug/mL
							Bis (2-chloroethyl)ether	200 ug/mL
						•	Bis(2-ethylhexyl) phthalate	200 ug/mL
						•	Butyl benzyl phthalate	
						•	Carbazole	- 1
	_		_				Chrysene	200 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

						- 1			
Date   Date   Date   Dillitate   Files   Notime   Modes   Discrete   Part   Modes   Discrete   Di				<u> </u>	Reagent	Parent Reagent			
10   10   10   10   10   10   10   10		EXD +cC	Prep		Final	Ę	olume	(	() () () () () ()
District of pitchiales   200   District of pitchiales   200		חשרה	חמרם		^orume	J T	ragea	- 1	CONCENTRALION
The control put black of the control of the contr									
Diseasor filtration   Diseasor filtration									
District plants   District p								Dibenz (a,h) anthracene	
Directly phths are 200   Directly phths are 200								Dibenzofuran	
Princetyle pithulate   200								Diethyl phthalate	
Pluotentheme								Dimethyl phthalate	
Pluceachinese   200								Diphenylamine	
Exacellocrobergeneee								Fluoranthene	
								Fluorene	
Hearth   H								Hexachlorobenzene	
The continue contin								Heachtoropenice	
Headiniotocockane   Restek, Lot A0127669   Restek   Restek, Lot A0127669   Restek   Res								Hexachlorobucanene	
Induction   Paster   Paster								Hexachlorocyclopentadiene	
Tabphorone   Tab								Hexachloroethane	
11/30/19   Restek, Lot A0120500   Fluchased Reagent)   Fluctbonzene   200   Restek, Lot A0120500   Rester Reagent)   200   Rester Rester Reagent)   200   Rester								Indeno[1,2,3-cd]pyrene	
National Continue   Nati								Isophorone	
N. Nitrosodimethylanine 200   N								N-Nitrosodi-n-propylamine	
National Control								N-Nitrosodimethylamine	
Nighthalene								N-Nitrosodiphenylamine	
Mittobensele 200   Phenantheme 200   Pyrese 200   P								Naphthalene	
Pertachlocophenol								Nitrobenzene	
Pienathtene   200   Pienathtene   200   Pienathtene   200   Pyene   Pyriam   200   Pyriam   200   Pyriam   200   Pyriam   200   Pyriam   200   200   Pyriam   200   200   Pyriam   200								Pentachlorophenol	
Picture   Pytene   Pytene   Pytene   Pytene   Pytene   Pytene   200								Dhenan+hrene	200 11g/mT.
1/30/19   Restek, Lot A0130500   Purchased Reagent   Pyridine   200   2 - Fluorobiphenol (Surr)   5000   2 - Fluorobiphenol (Surr)   5 - Fluorobiphenol (S								Phanol	200 dg/mT.
1,30/19								Direct	
01/30/19   Restek, Lot A0130500   (Purchased Reagent)   2,4,6 Tribromophenol (Surr)   5000   2-Fluorobhishenol (Surr)   5000   12/30/19   Restek, Lot A0127668   (Purchased Reagent)   Famphur   Famphur   5000   Restek, Lot A0123057   (Purchased Reagent)   Famphur   5000   11/30/18   Restek, Lot A012780   (Purchased Reagent)   Alachlor   5000   2000								ryrene	
1/30/19   Restek, Lot AU130300   (Furchased Reagent)   2-Fluorobjathenyl   5000   2-Fluorobjathenyl   2000		7		7 7 6			,		
Carlotrophenol (Surr)   5000   Nitrobenzene-d5 (Surr)   5000   Nitrobenzene   5000   Nitrobenzene   5000   Nitrobenzene   5000   Nitrobenzene   5000   Nitrobenzene   5000   Nitrobenzene   1000   N	MS-56/685_00004	01/30/13		Lot AU130		(Purchased Reagent	_	Toue	
Comparison								2-Fluorobiphenyl	
Nitrobenzene-d5 (Surr)   5000									
Depon-1-d5 (Burr)   Phenol-d5 (Burr)   Formation   Phenol-d5 (Burr)   5000									
Deciding Restek, Lot A0127668								Phenol-d5 (Surr)	
11/30/19   Restek, Lot A0127668   (Purchased Reagent)   Alachlor   14000									
11/30/19   Restek, Lot A0133057   Purchased Reagent)   Alachhor   Alachhor	- 1	$\vdash$					)	Famphur	
0007         11/30/18         Restek, Lot A0127472         (Purchased Reagent)         3,3'-Dichlorobenzidine         2000           0005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Latzaine         2000           0005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         1,1'-Biphenyl         1000           09/30/18         Restek, Lot A0125805         (Purchased Reagent)         1,1'-Biphenyl         1000           1,2,4,5-Tetrachlorobenzene         1000         1,2'-4'-Trichlorobenzene         1000           1,3-Diphenylhydrazine         1000         1,3-Diphenylhydrazine         1000           1,3-Diphenylhydrazine         1000         1,4-Diphenylhydrazine         1000           1,4-Diphenylhydrazine         1000         1,4-Diphenylhydrazine         1000           1,4-Diphenylhydrazine         1000         1,4-Diphenylhydrazine         1000           1,4-Diphenylhydrazine         1000         1,4-Diphenylhydrazine         1000           1,4-Diphenylhalene         1000         1,4-Dioxane         1000           1,4-Dioxane         1000         1,4-Dioxane         1000           1,4-Dioxane         1000         1,4-Dioxane         1000           1,4-Dioxane         1000 <td></td> <td>06/30/19</td> <td></td> <td>Lot A0133</td> <td></td> <td></td> <td>(</td> <td>Alachlor</td> <td></td>		06/30/19		Lot A0133			(	Alachlor	
06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Benzoic acid         2000           0005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine         2000           09/30/18         Restek, Lot A0125805         (Purchased Reagent)         1/2.4/5-Tetrachlorobenzene         1000           1/2.4/-Trichlorobenzene         1000           1/2.4/-Trichlorobenzene         1000           1/2-Diphenylhydrazine         1000           1/3-Dichlorobenzene         1000           1/4-Dichlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischlorobenzene         1000           1/4-Dischloropenzene         1000		11/30/18		Lot A0127			)	3,3'-Dichlorobenzidine	
11/30/18   Restek, Lot A0127580   Caprolactam   Caprolac		06/30/18		Lot			)		
Caprolactam		11/30/18		Lot			(	Atrazine	
1,1'-Biphenyl								Caprolactam	
1000 1000 1000 1000 1000 1000 1000 100	MS-571995_00001	09/30/18		Lot A0125			)	1,1'-Biphenyl	
1000 1010.97 1010.97 1000 1000 1000 1000	1							1,2,4,5-Tetrachlorobenzene	
1000 1010.97 1000 1000 1000 1000 1000 1000								1,2,4-Trichlorobenzene	
1010.97 1000 1000 1000 1000 1000 1000								1,2-Dichlorobenzene	
10000								1,2-Diphenylhydrazine	
10000 1 10000 1000								1,3-Dichlorobenzene	1
10000								1,3-Dinitrobenzene	
1000								1,4-Dichlorobenzene	1000 ug/mL
1000								1,4-Dioxane	1000 ug/mL
1000								1-Methylnaphthalene	
								2,2'-oxybis[1-chloropropane]	

Lab Name: TestAmerica Denver Job No.: 320-39023-1

Reagent ID	E C			Neageiit			_
	Date	Prep Date	Dilutant Used	Final Volume	Volume Reagent ID Added	Analyte	Concentration
					_	2,3,4,6-Tetrachlorophenol	
						2,4,5-Trichlorophenol	1000 ug/mL
						2,4,6-Trichlorophenol	
						2,4-Dichlorophenol	
						2,4-Dimethylphenol	- 1
						2,4-Dinitrophenol	2000 ug/mL
						2,4-Dinitrotoluene	1000 ug/mL
						2,6-Dichlorophenol	1000 ug/mL
						2,6-Dinitrotoluene	1000 ug/mL
						2-Chloronaphthalene	1000 ug/mL
						2-Chlorophenol	1000 ug/mL
						2-Methylnaphthalene	1000 ug/mL
						2-Methylphenol	
						2-Nitroaniline	1000 ug/mL
						2-Nitrophenol	
						3 & 4 Methylphenol	1000 ug/mL
						3-Nitroaniline	
						4,6-Dinitro-2-methylphenol	2000 ug/mL
						4-Bromophenyl phenyl ether	1000 ug/mL
						4-Chloro-3-methylphenol	1000 ug/mL
						4-Chloroaniline	1000 ug/mL
						4-Chlorophenyl phenyl ether	
						4-Nitroaniline	1000 ug/mL
						4-Nitrophenol	2000 ug/mL
						Acenaphthene	1000 ug/mL
						Acenaphthylene	
						Acetophenone	1000 ug/mL
						Aniline	1000 ug/mL
						Anthracene	
						Azobenzene	1000 ug/mL
						Benzo[a]anthracene	1000 ug/mL
						Benzo[a]pyrene	1000 ug/mL
						Benzo[b]fluoranthene	1000 ug/mL
						Benzo[g,h,i]perylene	1000 ug/mL
						Benzo[k]fluoranthene	
						Benzyl alcohol	1000 ug/mL
						Bis(2-chloroethoxy)methane	1000 ug/mL
						Bis (2-chloroethyl) ether	
						-ethylhe	1000 ug/mL
						Butyl benzyl phthalate	
						Carbazole	1000 ug/mL
						Chrysene	1000 ug/mL
						Di-n-butyl phthalate	1000 ug/mL
						Di-n-octyl phthalate	1000 ug/mL
						Dibenz (a,h) anthracene	1000 ug/mL
						Dibenzofuran	1000 ug/mL
						Diethyl phthalate	1000 ug/mL
						Dimethyl phthalate	1000 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

SDG No.:

1000 ug/mL 1000 ug/mL 1000 ug/mL 400 ug/mL 400 ug/mL 400 ug/mL 2000 ug/mL 2000 ug/mL ng/mL 1000 ug/mL 1000 ug/mL ng/mL ng/mL 80 ug/mL 80 ug/mL 80 ug/mL ng/mL Tm/bn 0001 .000 ug/mL .000 ug/mL Jm/bn 000 2000 ug/mL 2000 ug/mL Concentration ng/mL .000 ug/mL .000 ug/mL .000 ug/mL ng/mL 400 ug/mL 2000 ug/mL 2000 ug/mL 2000 ug/mL 2000 ug/mL 80 ug/mL 80 ug/mL ng/mL 80 80 200 uL 2,4,6-Tribromophenol (Surr) Isophorone N-Nitrosodi-n-propylamine Hexachlorocyclopentadiene N-Nitrosodimethylamine Hexachloroethane Indeno[1,2,3-cd]pyrene N-Nitrosodiphenylamine 1,4-Dichlorobenzene-d4 1,4-Dichlorobenzene-d4 Nitrobenzene-d5 (Surr) (Surr) (Surr) Hexachlorobutadiene Analyte Hexachlorobenzene Pentachlorophenol Phenanthrene-d10 Acenaphthene-d10 Phenanthrene-d10 Acenaphthene-d10 2-Fluorobiphenyl 2-Fluorophenol ( Phenol-d5 (Surr) Chrysene-d12 Naphthalene-d8 Naphthalene-d8 Terphenyl-d14 Diphenylamine Fluoranthene Nitrobenzene Phenanthrene Perylene-d12 Perylene-d12 Chrysene-d12 Naphthalene Fluorene Pyridine Famphur Pyrene Phenol 50 mL Volume Added (Purchased Reagent) Parent Reagent 0.5 mL MS-HSLA STK 00040 Reagent ID 250 mL MS-567684 00019 Reagent Volume Final 06/22/17 | Methylene Chloride, Lot | 157164 06/22/18 04/03/18 Methylene Chloride, Lot 181545 Restek, Lot A0112833 Dilutant Used Prep Date 06/22/18 07/31/20 Exp Date Reagent ID ..MS-567684 00019 MS-HSLA080\_00035 .MS-IS 0001

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80 ug/mL 80 ug/mL

1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene

Caprolactam 1,1'-Bipheny

80

ng/mL 80 ug/mL 160 ug/mL 80 ug/mL ng/mL

Alachlor 3,3'-Dichlorobenzidine

Benzoic acid

Atrazine

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

				4 0 0 0 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	
							1,3-Dichlorobenzene	
							1,3-Dinitrobenzene	
							1,4-Dichlorobenzene	
							1,4-Dioxane	
							1-Methylnaphthalene	
							2,2'-oxybis[1-chloropropane]	
							2,3,4,6-Tetrachlorophenol	30 ng/mL
							2,4,5-Trichlorophenol	
							2,4,6-Trichlorophenol	
							2,4-Dichlorophenol	
							2,4-Dimethylphenol	160 ug/mL
							2 / = Dinitropinenoi	Tm/m1
							2,4-Dintelocateme 2.6-Dichlorophenol	80 ug/mT.
							2,6-Dinitrotoluene	
							2-Chloronaphthalene	
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							-Z i	
							3 & 4 Methylphenol	1m/mn 88
							3-Nitroaniline	1m/mn 88
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	30 ng/mL
							4-Chloro-3-methylphenol	
							0)	
							4-Chlorophenyl phenyl ether	
							4-Nitroaniline	80 ug/mL
							4-NICIODIIIOI	
							Acenaphrhene	
							Acenaphonone	7m/m/ 11m/m1
							Aniline	
							Anthracene	
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	
							Benzo[g,h,i]perylene	- 1
							Benzo[k]fluoranthene	30 ng/mL
							Benzyl alcohol	
							Bis (2-chloroethoxy) methane	80 ug/mL
							Bis(2-chloroethy1)ether	
							Bis(2-ethylnexyl) phthalate	Tm/bn 08
	_				_		Butyl benzyl phthalate	Tm/bn 08

Lab Name: TestAmerica Denver

SDG No.:

Reagent ID Date Date U  U  WS-HSLA_STK_00040 06/30/18 01/30/18 Methylene 181545	Dilutant	Final Volume	Reagent ID Ac	Volume Added Carbazole Chrysene	Concentration 80 ug/mL
STK_00040 06/30/18 01/30/18				Carbazole Chrysene	80 ug/mL
STK_00040 06/30/18 01/30/18				Chrysene	1111
STK_00040 06/30/18 01/30/18					80 ug/mL
STK_00040 06/30/18 01/30/18				Di-n-butyl phthalate	
STK_00040 06/30/18 01/30/18				Di-n-octyl phthalate	
STK_00040 06/30/18 01/30/18				Dibenz (a,h) anthracene	80 ug/mL
STK_00040 06/30/18 01/30/18				Dibenzofuran	
STK_00040 06/30/18 01/30/18				Diethyl phthalate	1m/mn 80
STK_00040 06/30/18 01/30/18				Dimethyl phthalate	
STK_00040 06/30/18 01/30/18				Diphenylamine	
STK_00040 06/30/18 01/30/18			_	Fluoranthene	80 ug/mL
STK_00040 06/30/18 01/30/18				Fluorene	
STK_00040 06/30/18 01/30/18				Hexachlorobenzene	Jm/gn 08
STK_00040 06/30/18 01/30/18				Hexachlorocyclopentadiene	
STK_00040 06/30/18 01/30/18				Hexachloroethane	
STK_00040 06/30/18 01/30/18				Indeno[1,2,3-cd]pyrene	
STK_00040 06/30/18 01/30/18				Isophorone	80 ug/mL
STK_00040 06/30/18 01/30/18				N-Nitrosodi-n-propylamine	
_STK_00040 06/30/18 01/30/18				N-Nitrosodimethylamine	
_STK_00040 06/30/18 01/30/18				N-Nitrosodiphenylamine	
_STK_00040 06/30/18 01/30/18				Naphthalene	
_stk_00040 06/30/18 01/30/18				Nitrobenzene	
STK_00040 06/30/18 01/30/18				Pentachlorophenol	
STK_00040 06/30/18 01/30/18				Phenanthrene	
STK_00040 06/30/18 01/30/18				Phenol	
STK_00040 06/30/18 01/30/18				Pyrene	80 ug/mL
STK_00040 06/30/18 01/30/18			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
_STK_00040 06/30/18 01/30/18		MS	MS-IS_00013	50 uL 1,4-Dichlorobenzene-d4	
_STK_00040 06/30/18 01/30/18				Acenaphthene-d10	
_STK_00040 06/30/18 01/30/18				Chrysene-d12	
_STK_00040 06/30/18 01/30/18				Naphthalene-d8	40 ug/mL
STK_00040 06/30/18 01/30/18				Dhonanthrone_A10	
0.04.0	ylene Chloride, Lot	10 mL MS-	567685_00004	0.4 mL 2,4,6-Tribromophenol (Surr)	
	O			2-Fluorobiphenvl	200 ug/mL
				2-Fluorophenol (Surr)	200 ug/mL
				lı0	
				Phenol-d5 (Surr)	200 ug/mL
				Terphenyl-d14 (Surr)	200 ug/mL
		MS	MS-568023_00042	1 mL Famphur	200 ug/mL
		MS	MS-568033_00026 0	0.5 mL Alachlor	200 ug/mL
		MS		1 mL 3,3'-Dichlorobenzidine	200 ug/mL
		MS	MS-569731_00070	2 mL Benzoic acid	400 ug/mL
		MS	MS-569732 HSL_00005	1 mL Atrazine	200 ug/mL
		MS	MS-571995_00001	2 mL 1,1'-Biphenyl	
				1,2,4,5-Tetrachlorobenzene	Z00 ng/mT

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

200 ug/mL 200 ug/mL ng/mL ng/mL ng/mL 200 ug/mL 200 ug/mL ng/mL ng/mL ng/mL ng/mL ng/mL ng/mL Tm/bn ng/mL 100 ug/mL 200 ug/mL ng/mL Concentration 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL ng/mL 200 ug/mL 400 ug/mL 200 ug/mL 400 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL nd/mr 200 ug/mL 200 ug/mL 200 ug/mL 202.195 Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Benzyl alcohol
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroethyl)phthalate 2,2'-oxybis[1-chloropropane] 4-Chlorophenyl phenyl ether 2,3,4,6-Tetrachlorophenol
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol 4,6-Dinitro-2-methylphenol 4-Bromophenyl phenyl ether 4-Chloro-3-methylphenol 1,2,4-Trichlorobenzene 1,2-Diphenylhydrazine 2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dioxane 1-Methylnaphthalene 2-Methylnaphthalene 2-Chloronaphthalene Analyte 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 1,3-Dinitrobenzene 2,6-Dichlorophenol & 4 Methylphenol 4-Chloroaniline 2-Nitroaniline 4-Nitroaniline Acenaphthylene 3-Nitroaniline 2-Chlorophenol 2-Methylphenol 4-Nitrophenol 2-Nitrophenol Acenaphthene Acetophenone Anthracene Azobenzene Volume Added Parent Reagent Reagent ID Volume Reagent Final Dilutant Used Prep Date Exp Date Reagent ID

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

(Surr) Caprolactam 1,1'-Biphenyl 1,2,4,5-Tetrachlorobenzene Isophorone N-Nitrosodi-n-propylamine Hexachlorocyclopentadiene Dibenz (a,h) anthracene Dibenzofuran Diethyl phthalate Dimethyl phthalate N-Nitrosodimethylamine Alachlor 3,3'-Dichlorobenzidine Benzoic acid 1,2,4-Trichlorobenzene Butyl benzyl phthalate Indeno[1,2,3-cd]pyrene N-Nitrosodiphenylamine (Surr 1,2-Diphenylhydrazine 2,4,6-Tribromophenol 2-Fluorobiphenyl Di-n-octyl phthalate (Surr) Di-n-butyl phthalate Terphenyl-d14 (Surr) 1,3-Dinitrobenzene 1,4-Dichlorobenzene **Hexachlorobutadiene** 1,2-Dichlorobenzene 3-Dichlorobenzene Analyte Fluorene Hexachlorobenzene Pentachlorophenol Hexachloroethane Nitrobenzene-d5 (Surr 2-Fluorophenol Diphenylamine Fluoranthene Nitrobenzene Phenanthrene Naphthalene Carbazole Phenol-d5 Chrysene Atrazine Pyridine Famphur Pyrene Phenol Volume Added (Purchased Reagent) Parent Reagent Reagent ID Reagent Volume Final Restek, Lot A0133057 Restek, Lot A0127472 Restek, Lot A0123819 Restek, Lot A0125805 Restek, Lot A0130500 Restek, Lot A0127668 Lot A0127580 Dilutant Used Restek, Prep Date 06/30/19 11/30/18 06/30/18 05/31/19 01/30/19 11/30/18 09/30/18 Exp Date ..MS-568033 00026 ..MS-569730 HSL 00007 ..MS-569731 00070 ..MS-569732 HSL 00005 Reagent ID ..MS-568023 00042 ..MS-567685 00004 ..MS-571995 00001

ng/mL

ng/mL 200 ug/mL ng/mL

Concentration

ng/mL

170 ug/mL 200 ug/mL

200 ug/mL

ng/mL

ng/mL 200 ug/mL 200 ug/mL 200 ug/mL

ng/mL

200 ug/mL

200 ug/mL 200 ug/mL 200 ug/mL

200 ug/mL 200 ug/mL

400 ug/mL 200 ug/mL

200 ug/mL ng/mL ng/mL

5000 ug/mL

5000 ug/mL 000 ng/mF

5000 ug/mL 5000 ug/mL

400 ug/mL 5000 ug/mL ng/mL

:000 ug/mL 2000 ug/mL 2000 ug/mL

ng/mL

Tw/bn

1000 ng/mL 1010.97 ug/mL

.000 ug/mL

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1000 ug/mL 1000 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Reagent ID			100000	rarelle veagelle	٠		
1.4-CHO CONTROL   2.27-CONTROL   2.2	Exp Date	Prer Date	Final Volume		Volume Added	Analyte	Concentration
1.98et/2014/04/19/19/19/19/19/19/19/19/19/19/19/19/19/						- 1	1000 ug/mL
2.2 4-68/1018						1-Methylnaphthalene	1000 ug/mL
2.3.4/6-72140HIX   2.4.4-72140HIX   2.						2,2'-oxybis[1-chloropropane]	
2 4 6 - Extraction of the control of						2,3,4,6-Tetrachlorophenol	1000 ug/mL
2 4-010thorput 2 2-4-010thorput 2 2-4-01						2,4,5-Trichlorophenol	1000 ug/mL
2 4 Distriction 2 5 4 Distriction 2 5 4 Distriction 2 5 4 Distriction 2 6 Distriction 3 6 Distriction 3 6 Distriction 3 7 1 Computed 3 7						2,4,6-Trichlorophenol	
2.4 Enhantency 2.5 (4 Dinit troopt 2.5 (4 Dini						2,4-Dichlorophenol	
2.4 - DIDITIONS 2.5 - Childron 3.5 -						2,4-Dimethvlphenol	
2.4 G-Dirittoria  3.4 G-Dirittoria  3.4 G-Dirittoria  4.4 G-Dirittoria  5.4 G-Dirittoria  6.4 G-Dirittoria  7.4 G-Dirittoria  8.4 G-Dirittoria  8.4 G-Dirittoria  8.4 G-Dirittoria  8.4 G-Dirittoria  8.4 G-Dirittoria  8.4 G-Dirittoria  9.4 G-Diritt						2,4-Dinitrophenol	2000 ug/mL
2.6-Diditions 2.7-Chiconaghi 3.7-Chiconaghi 3.7-Chi						2,4-Dinitrotoluene	
2-Chloropping 2-Chloropping 2-Chloropping 2-Nettorphent 2-Nettorphent 2-Nettorphent 3-1-Nettorphent 3-1-Nettorphent 3-1-Nettorphent 4-Decomplian 4-Decomplian 4-Decomplian 4-Decomplian 6-Nettorphent 6-Chloropping 6-Nettorphent 6-Chloropping 6-Nettorphent						2,6-Dichlorophenol	
2-Chloronghing						2.6-Dinitrotoluene	
2-Nettylphan						2-Chloronaphthalene	
2 - Methylphent   3						2-Chlorophenol	1000 ug/mL
Z-Nitronilii Z-Nitroniliii Z-Nitroniliiii Z-Nitroniliii Z-Nitroniliii Z-Nitroniliiii Z-Nitroniliiii Z-Nitroniliiii Z-Nitroniliiiii Z-N						2-Methvlnaphthalene	
2-Nitropanilii 3 * 4 Methyll 3 * 4 Methyll 3 * 4 Methyll 3 * 4 Achitucanilii 4 * Chiotocanilii 4 * Chiotocanilii 4 * Chiotocanilii 4 * Nitrophenor Achitucanilii 4 * Nitrophenor Achitucanilii 4 * Nitrophenor Achitucanilii 5 * 4 Chiotocanilii 6 * Achitucaniliii 7 * Achitucaniliii 8 * Achitucaniliii 9 * Achitucaniliii 1 * Achitucaniliiii 1 * Achitucaniliiii 1 * Achitucaniliiii 1 * Achitucaniliiii 1 * Achitucaniliiiii 1 * Achitucaniliiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii						2-Methylphenol	
2-Nitrophenon   3						2-Nitroaniline	
3 & 4 Nethyll						2-Nitrophenol	
3-Nitroanilii 4-Chiotoo-3-m 4-Chlocophany 6-Chiotoophany 7-Chiotoophany 8-Chiotoophany 8-Ch						3 & 4 Methylphenol	
4,6-Dinitro-7 4-Bromponiii 4-Chloropheni 4-Chloropheni 4-Chloropheni 4-Chloropheni 4-Chloropheni 4-Chloropheni 4-Chloropheni 4-Chloropheni Acenaphthylene Ac						3-Nitroaniline	
4-Eromophany 4-Eromophany 4-Chlorophany 6-Chlorophany 6-Ch						4,6-Dinitro-2-methylphenol	
4-Chloro-3-mg 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, 4-Chloropheno, Acenaphthyle; Acenapht						4-Bromophenyl phenyl ether	
4-Chloroanili 4-Chloroanili 4-Chloroanili 4-Nitroanilii 4-Nitroanilii 4-Nitroanilii 4-Nitroanilii 4-Nitroaniliii Acenaphthylen Acenaphthylen Acenaphthylen Acetophenon Anthracen Acetophenon Anthracen Benzolalathi Benzolalathi Benzolalpty Benzolalp						4-Chloro-3-methylphenol	- 1
4-Chiorophena						4-Chloroaniline	
4-Nitroanilii  4-Nitropinal Acenaphthyler Acetophenone Aniline Anthracene Arobenzene Benzo(a) pren Benzo(b) filoo Benzo(b) fil						4-Chlorophenyl phenyl ether	
4-Nitrophenon Acenaphthale Acenaphthale Acetophenon Aniline Aniline Aniline Aniline Aniline Aniline Aniline Aniline Benzolalanth Benzolalanth Benzolalpuor Benzolkliuor Benzol						1	
Acetophenone Acetophenone Aniline Aniline Anthracene Ancheroer Ancheroer Anthracene Anthracene Benzolalpyrer Carbazole Chrysene Di-n-butyl pi						4-Nitrophenol	
Acetophenone Anthriane Anthracene Anthracene Arbacene Arbacene Arbacene Benzo[a]auth Benzo[a]auth Benzo[b]tluon Be						Acenaphthene	
Actophenone   Aniline   Benzo[a]anthn   Benzo[a]apter   Benzo[a]pter   Benzo[a]pter   Benzo[b]tluo   Benzo[b]tluo   Benzo[b]tluo   Benzo[b]tluo   Bis (2-chloro   Bis (2						Acenaphthylene	
Antiline Anthracene Arobenzene Benzo[a]anthi Benzo[a]apthi Benzo[a]pyrer Benzo[b]fluo Benzo[k,h,i] Benzo[k,h,						Acetophenone	
Anthracene Azobenzene Benzo[a]anthi Benzo[b]fluo Benzo[k]fluo Benzo[k]fluo Benzo[k]fluo Benzo[k]fluo Bis(2-chlorof						Aniline	
Azobenzene Benzo[a]anthi Benzo[b]fluor Benzo[b]fluor Benzo[b]fluor Benzo[b]fluor Benzyl alcoh Bis(2-chlorof Bis(2-						Anthracene	
Benzo[a]anthn Benzo[a]pyrer Benzo[b]fluoz Benzo[b]fluoz Benzo[b]fluoz Benzo[k]fluoz Benzo[k]fluoz Benzo[k]fluoz Benzo[k]fluoz Benzo[k]fluoz Benzo[k]fluoz Benzo[k]fluoz Bis (2-chloros Bis						Azobenzene	
Benzo[a]pyrer Benzo[g,h,i]r Benzo[g,h,i]r Benzo[g,h,i]r Benzo[g,h,i]r Benzo[g,h,i]r Benzo[k]fluor Benzo[k]fluor Benzyl alcoh Cachoroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc Bis(2-chloroc)						Benzo[a]anthracene	1000 ug/mL
Benzo[g/h/i]F Benzo[g/h/i]F Benzo[g/h/i]F Benzo[g/h/i]F Benzo[k]filuoi Benzyl alcohr Benzyl alcohr Bis (2-chloroe Bis (2-chloroe) Bis						Benzo[a]pyrene	1000 ug/mL
Benzo[g,h,i]F Benzo[k]filuo Benzyl alcoho Bis (2-chloroe Bis (2-chloroe Bis (2-chloroe Bis (2-chlylh)e Butyl benzyl Carbazole Chrysene Di-n-butyl pl Di-n-octyl pl						Benzo[b]fluoranthene	1000 ug/mL
Benzo[k]fluoz Benzyl alcoho Benzyl alcoho Bis (2-chloroe Bis (2-chloroe Bis (2-chloroe Bis (2-chloroe Bis (2-chloroe Carbazole Chrysene Di-n-butyl pl Di-n-octyl pl Di-n-octyl pl						Benzo[g,h,i]perylene	1000 ug/mL
Benzyl alcoho Bis (2-chloroe Bis (2-chloroe Bis (2-chloroe Bis (2-chlylne Bis (2-						Benzo[k]fluoranthene	
Bis (2-chloroe Bis (2						Benzyl alcohol	1000 ug/mL
Bis(2-chloroe Bis(2-chloroe Bis(2-chloroe Bis(2-chlylhe Butyl benzyl Butyl benzyl Carbazole Chrysene Di-n-butyl pl						Bis (2-chloroethoxy) methane	1000 ug/mL
Bis(2-ethylhe   Butyl benzyl   Butyl benzyl   Butyl benzyl   Carbazole   Carbazole   Chrysene   Di-n-butyl pl						Bis (2-chloroethyl) ether	1000 ug/mL
Butyl benzyl						Bis (2-ethylhexyl) phthalate	1000 ug/mL
Carbazole Chrysene Di-n-butyl pi						Butyl benzyl phthalate	1000 ug/mL
Chrysene Di-n-butyl pi Di-n-octyl pi						Carbazole	1000 ug/mL
Di-n-butyl pł						Chrysene	1000 ug/mL
Di-n-octyl pl						Di-n-butyl phthalate	1000 ug/mL
: (						Di-n-octyl phthalate	1000 ug/mL
ן הדאבוול (פי זוו) פי						Dibenz (a,h) anthracene	1000 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

					Darrent Readment		
	E	9	£	Reagent			
Reagent ID	Exp Date	rrep Date	Dilutant Used	Volume	Reagent ID Added	d Analyte	Concentration
						Dibenzofuran	1000 ug/mL
						Diethyl phthalate	
						Dimethyl phthalate	
						Diphenylamine	
						Fluoranthene	1000 ug/mL
						Fluorene	1000 ug/mL
						Hexachlorobenzene	
						Hexachlorobutadiene	
						Hexachlorocyclopentadiene	1000 ug/mL
						Hexachloroethane	1000 ug/mL
						Indeno[1,2,3-cd]pyrene	1000 ug/mL
						Isophorone	
						N-Nitrosodi-n-propylamine	
						N-Nitrosodimethylamine	
						N-NICIOSOGIPHENYIGH Naphthalene	1000 ug/mL
						Nitrobenzene	1000 ug/mL
						Pentachlorophenol	
						Phenanthrene	1000 ug/mL
						Phenol	
						Pyrene	1000 ug/mL
						Pyridine	2000 ug/mL
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019 50	mL   1,4-Dichlorobenzene-d4	400 ug/mL
			# O H - O H			Acenaphthene-d10	400 ug/mL
						Chrysene-d12	400 ug/mL
						Naphthalene-d8	400 ng/mL
						Perylene-d12	400 ng/mL
						Phenanthrene-d10	400 ng/mL
MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	1,4-Dichlorobenzene-d4	
						Acenaphthene-d10	
						Unrysene-diz	Tm/gn 0007
						Pervlene-d12	2000 ug/mL
						Phenanthrene-d10	2000 ug/mL
MS-HSLA120_00035	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-HSLA_STK_00040 300	uL 2,4,6-Tribromophenol (Surr)	120 ug/mL
			) 1 1 1 1 1			2-Fluorobiphenyl	120 ug/mL
						2-Fluorophenol (Surr)	120 ug/mL
						Nitrobenzene-d5 (Surr)	120 ug/mL
						Phenol-d5 (Surr)	120 ug/mL
						Terphenyl-d14 (Surr)	
						Famphur	120 ug/mL
						Alacinot 3.3'-Dichlorobenzidine	120 ug/mL.
						Benzoic acid	
						Atrazine	
					_	Caprolactam	120 ug/mL

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Lab Name: TestAmerica Denver

SDG No.:

				00 00 00 00 00 00 00 00 00 00 00 00 00	Parent Reagent	ע		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final	Reagent ID	Volume	Analyte	Concentration
					,		1,1'-Biphenyl	120 ug/mL
							1,2,4,5-Tetrachlorobenzene	
							1,2,4-Trichlorobenzene	
							1,2-Dichlorobenzene	
							1,2-Diphenylhydrazine	121.317 ug/mL
							1,3-Dichlorobenzene	120 ug/mL
							1,3-Dinitrobenzene	120 ug/mL
							1,4-Dichlorobenzene	120 ug/mL
							1,4-Dioxane	120 ug/mL
							1-Methylnaphthalene	120 ug/mL
							2,2'-oxybis[1-chloropropane]	120 ug/mL
							2,3,4,6-Tetrachlorophenol	120 ug/mL
							2,4,5-Trichlorophenol	120 ug/mL
							2,4,6-Trichlorophenol	
							2,4-Dichlorophenol	
							2,4-Dimethylphenol	
							2,4-Dinitrophenol	
							2,4-Dinitrotoluene	
							2,6-Dichlorophenol	
							2,6-Dinitrotoluene	
							2-Chloronaphthalene	120 ug/mL
							2-Chlorophenol	120 ug/mL
							2-Methylnaphthalene	120 ug/mL
							2-Methylphenol	120 ug/mL
							2-Nitroaniline	120 ug/mL
							2-Nitrophenol	120 ug/mL
							3 & 4 Methylphenol	120 ug/mL
							3-Nitroaniline	120 ug/mL
							4,6-Dinitro-2-methylphenol	240 ug/mL
							4-Bromophenyl phenyl ether	
							4-Chloro-3-methylphenol	120 ug/mL
							4-Chloroaniline	120 ug/mL
							4-Chlorophenyl phenyl ether	120 ug/mL
							4-Nitroaniline	
							4-Nitrophenol	
							Acenaphthene	120 ug/mL
							Acenaphthylene	120 ug/mL
							Acetophenone	120 ug/mL
							Aniline	
							Anthracene	120 ug/mL
							Azobenzene	120 ug/mL
							Benzo[a]anthracene	120 ug/mL
							Benzo[a]pyrene	120 ug/mL
							Benzo[b]fluoranthene	120 ug/mL
							Benzo[g,h,i]perylene	
							Benzo[k]fluoranthene	120 ug/mL
							Benzyl alcohol	120 ug/mL
_	 			_			Bis(2-chloroethoxy)methane	120 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

				Reagent	rarent Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added Analyte	Concentration
						Bis(2-ch]oroethw])ether	120 mg/mT.
						Bis(2-ethylhexyl) phthalate	
						10	120 ug/mL
						Carbazole	120 ug/mL
						Chrysene	
						Di-n-butyl phthalate	120 ug/mL
						Dibenzofuran	
						Diethyl phthalate	120 ug/mL
						Dimethyl phthalate	120 ug/mL
						Diphenylamine	
						Fluoranthene Fluoranthene	120 ug/mL
						Hexachlorobenzene	
						Hexachlorobutadiene	
						Hexachlorocyclopentadiene	
						Hexachloroethane	
						Indeno[1,2,3-cd]pyrene	120 ug/mL
						Isophorone	
						N-Nitrosodi-n-propylamine	120 ug/mL
						N-Nitrosodimethylamine	120 ug/mL
						N-Nitrosodiphenylamine	
						Naphthalene	
						Nitrobenzene	
						Pentachlorophenol	
						Phenanthrene	
						Phenol	- 1
						Pyrene	120 ug/mL
					1 1 1		
					MS-IS_00013	50 uL 1,4-Dichlorobenzene-d4	
						Acenaph chene-alo	
						Unrysene-diz	40 ug/mL
						Doxx10n0_410	Tm/pr: UV
						Phenanthrene-d10	
.MS-HSLA_STK_00040	06/30/18	01/30/18	8 Methylene Chloride, Lot	10 mL	MS-567685_00004	0.4 mL 2,4,6-Tribromophenol (Surr)	200 ug/mL
			181545			2-Fluorohinhanvl	200 mg/mT.
						2-Fluorophenol (Surr)	200 ug/mT,
						LO	
							200 ug/mL
					MS-568023 00042	1 mL Famphur	
						0.5 mL Alachlor	200 ug/mL
					- 1	mL 3,3'-Dic	200 ug/mL
					- 1		400 ug/mL
_		_			MS-569/32 HSL_00005	1 mm/Atrazine	Tm/bn 007

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Lab Name: TestAmerica Denver

SDG No.:

Lab Name: TestAmerica Denver

SDG No.:

			· ·		Parent Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used V	Final Volume	Volume   Reagent ID   Added	ume led Analyte	Concentration
						Bis (2-chlorosthown) methans	200 11g/mT
						Dis (2 cirror circos) others	
						<b>∽</b> I	TIII / BN 002
						DIS (2-echylhexyl) phohare	
						Butyl benzyl phthalate	
						Carbazole	
						Chrysene	200 ug/mL
						Di-n-butyl phthalate	200 ug/mL
						Di-n-octyl phthalate	200 ug/mL
						Dibenz (a, h) anthracene	200 ug/mL
						Dibenzofuran	200 ug/mL
						Diethyl phthalate	200 ug/mL
						Dimethyl phthalate	200 ug/mL
						Diphenylamine	170 ug/mL
						Fluoranthene	200 ug/mL
						Fluorene	
						Hexachlorobenzene	200 ug/mL
						Hexachlorobutadiene	200 ug/mL
						Hexachlorocyclopentadiene	200 ug/mL
						Hexachloroethane	200 ug/mL
						Indeno[1,2,3-cd]pyrene	
						Isophorone	200 ug/mL
						N-Nitrosodi-n-propylamine	200 ug/mL
						N-Nitrosodimethylamine	
						N-Nitrosodiphenylamine	200 ug/mL
						Naphthalene	
						Nitrobenzene	
						Pentachlorophenol	400 ug/mL
						Phenanthrene	200 ug/mL
						Phenol	200 ug/mL
						Pyrene	200 ug/mL
						Pyridine	400 ug/mL
MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)	2,4,6-Tribromophenol (Surr)	2000 ng/mL
						2-Fluorobiphenyl	5000 ug/mL
						2-Fluorophenol (Surr)	5000 ug/mL
						Nitrobenzene-d5 (Surr)	5000 ug/mL
						Phenol-d5 (Surr)	
						Terphenyl-d14 (Surr)	5000 ug/mL
	05/31/19		Lot A0127			Famphur	2000 ug/mL
MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)	Alachlor	4000 ug/mL
MS-569730 HSL 00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)	3,3'-Dichlorobenzidine	2000 ug/mL
	06/30/18		Restek, Lot A0123819			Benzoic acid	2000 ug/mL
MS-569732 HSL 00005	11/30/18		Restek, Lot A0127580		(Purchased Reagent)	Atrazine	2000 ug/mL
I						Caprolactam	2000 ug/mL
MS-571995_00001	09/30/18		Restek, Lot A0125805		(Purchased Reagent)	1,1'-Biphenyl	1000 ug/mL
						1,2,4,5-Tetrachlorobenzene	1000 ug/mL
						1,2,4-Trichlorobenzene	1000 ug/mL
						1,2-Dichlorobenzene	1000 ug/mL
						1,2-Diphenylhydrazine	1010.97 ug/mL
=	-	_				-	

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

Reagent ID Date	ш п	Prep Date	Dilutant Used	Final	Reagent ID Added	le Analyte	Concentration
	_					1,3-Dichlorobenzene	1000 ug/mL
				_		1,3-Dinitrobenzene	1000 ug/mL
						1,4-Dichlorobenzene	1000 ug/mL
						1,4-Dioxane	1000 ug/mL
						1-Methylnaphthalene	1000 ug/mL
						2,2'-oxybis[1-chloropropane]	1000 ug/mL
						2,3,4,6-Tetrachlorophenol	1000 ug/mL
						2,4,5-Trichlorophenol	1000 ug/mL
						2,4,6-Trichlorophenol	
						2,4-Dichlorophenol	1000 ug/mL
						2,4-Dimethylphenol	
						2,4-Dinitrophenol	2000 ug/mL
						2,4-Dinitrotoluene	
						2,6-Dichlorophenol	1000 ug/mL
						2,6-Dinitrotoluene	1000 ug/mL
						2-Chloronaphthalene	1000 ug/mL
						2-Chlorophenol	1000 ug/mL
						2-Methylnaphthalene	
						2-Methylphenol	- 1
						2-Nitroaniline	1000 ug/mL
						2-Nitrophenol	1000 ug/mL
						3 & 4 Methylphenol	1000 ug/mL
						3-Nitroaniline	
						4,6-Dinitro-2-methylphenol	2000 ug/mL
						4-Bromophenyl phenyl ether	1000 ug/mL
						4-Chloro-3-methylphenol	1000 ug/mL
						(1)	1000 ug/mL
						4-Chlorophenyl phenyl ether	- 1
						4-Nitroaniline	
						4-Nitrophenol	- 1
						Acenaphthene	1000 ug/mL
						Acetapheny rene	
						Acerophenone	
						AHLLING	
						Aroborrono	
						Renzolalanthracene	1000 ug/mT.
						Benzola Dayrene	
						Benzo[b]fluoranthene	
						Benzola hilberylene	
						Benzo[k]fluoranthene	
						Benzyl alcohol	
						Bis (2-chloroethoxy) methane	
						Bis (2-chloroethyl) ether	
						Bis (2-ethylhexyl) phthalate	
						Butyl benzyl phthalate	1000 ug/mL
						Carbazole	1000 ug/mL
						Chrysene	1000 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

				Reagent	Farent Keagent			
	Exp	Prep	Dilutant	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	Concentration
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenvlamine	
							Fluoranthene	
							Fluorene	1000 ug/mL
							Hexachlorobenzene	
							Hexachlorobutadiene	
							Hexachlorocyclopentadiene	
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	
							Isophorone	
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019	20 mL	1,4-Dichlorobenzene-d4	400 ng/mT
			157164				A cananhthana_10	400 mT/mT.
							Aceniaphicinene-aro	
							Chrysene-dl2	400 ug/mL
							Naphthalene-d8	
							Ferylene-d12	
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	7		77				rnenanthrene-alv	
MS-56/684_00019	07/37/20		Restek, Lot AU112833		(Furchased Keagent)	ent)	1,4-Dichlorobenzene-d4	
							Acenaphthene-dl0	2000 ug/mL
							Unrysene-alz Namhthalono-d8	2000 ug/mL
							Dervi ene - d1 2	
							Phenanthrene-d10	- 1
	0	<b>-</b>    -					Ш	11
MS-HSLA160_00035	06/22/18	04/03/18	Methylene Chloride, Lot 181545	0.5 mL	MS-HSLA_STK_00040	400 uL	2,4,6-Tribromophenol (Surr)	
							×Ι	Tw/bn noT
								160 ug/mL
							a	
							(Sur	160 ug/mL
							Terphenyl-d14 (Surr)	
							Famphur	
							Alachlor	
				_			3,3'-Dichlorobenzidine	160 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

				1 0 0 0 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Benzoic acid	320 ug/mL
								160 ug/mL
							Caprolactam	160 ug/mL
							1,1'-Biphenyl	
							1,2,4,5-Tetrachlorobenzene	
							1,2,4-Trichlorobenzene	
							1,2-Dichlorobenzene	
							1,2-Diphenylhydrazine	161.756 ug/mL
							1,3-Dichlorobenzene	160
							1,3-Dinitrobenzene	160 ug/mL
							1,4-Dichlorobenzene	160 ug/mL
							1,4-Dioxane	
							1-Methylnaphthalene	
							2,2'-oxybis[l-chloropropane]	
							2, 3, 4, 6-Tetrachlorophenol	
							2,4,3-Trichlorophenol	160 ug/mL
							2,4,6-IfICHIOFOPHENOL	160 ug/mL
							2,4-Dimethylphenol	
							2,4-Dinitrophenol	
							2,4-Dinitrotoluene	
							2,6-Dichlorophenol	160 ug/mL
							2,6-Dinitrotoluene	160 ug/mL
							2-Chloronaphthalene	160 ug/mL
							2-Chlorophenol	160 ug/mL
							2-Methylnaphthalene	
							2-Methylphenol	- 1
							2-Nitroaniline	- 1
							3 & 4 Methylphenol	160 ug/mL
							3-Nitroaniline	160 ug/mL
							4-Bromophenyl phenyl ether	160 ug/mL
							4-CIIIOIO-3-IIIECIIYIPIIOI	160 ug/mT
							4-Chlorophenyl phenyl ether	
							4-Nitrophenol	320 ug/mL
							Acenaphthene	160 ug/mL
							Acenaphthylene	160 ug/mL
							Acetophenone	
							Aniline	
							Anthracene	- 1
							Azobenzene	- 1
							Benzo[a]anthracene	160 ug/mL
							Benzo[a]pyrene	
							Benzo[b]fluoranthene	- 1
	_			_	_		Benzo[g,h,1]perylene	Tw/bn 09T

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

				Reagent	Parent Reagent		
Readent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Readent ID	Volume Added Analvte	Concentration
						1	1
						Benzo[k]tluoranthene	
						Benzyl alcohol	160 ug/mL
						Bis (2-chloroethoxy) methane	160 ug/mL
						Bis(2-chloroethy1)ether	160 ug/mL
						Bis(2-ethylhexyl) phthalate	- 1
						Butyl benzyl phthalate	160 ug/mL
						Carbazole	160 ug/mL
						Chrysene	
						Di-n-butyl phthalate	
						Di-n-octyl phthalate	160 ug/mL
						Dibenz (a, h) anthracene	160 ug/mL
						Dibenzofuran	160 ug/mL
						Diethyl phthalate	
						Dimethyl phthalate	
						Diphenylamine	136 ug/mL
						Fluoranthene	160 ug/mL
						Fluorene	
						Hexachlorobenzene	
						Hexachlorobutadiene	
						Hexachlorocyclopentadiene	
						Hexachloroethane	160 ug/mL
						Indeno[1,2,3-cd]pyrene	160 ug/mL
						Isophorone	
						N-Nitrosodi-n-propylamine	160 ug/mL
						N-Nitrosodimethylamine	160 ug/mL
						N-Nitrosodiphenylamine	160 ug/mL
						Naphthalene	160 ug/mL
						Nitrobenzene	
						Pentachlorophenol	320 ug/mL
						Phenanthrene	160 ug/mL
						Phenol	160 ug/mL
						Pyrene	
							320 ug/mL
					MS-IS_00013	50 uL 1,4-Dichlorobenzene-d4	40 ug/mL
						Acenaphthene-d10	40 ug/mL
						Chrysene-d12	
						Naphthalene-d8	
						Perylene-d12	- 1
		$\dashv$				Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00040	06/30/18	01/30/18	Methylene Chloride, Lot	10 mL	MS-567685_00004	0.4 mL 2,4,6-Tribromophenol (Surr)	200 ug/mL
			7 17 10 1			2-Fluorobiphenvl	200 11g/mT.
						2-Fluorophenol (Surr)	
						li0	
							200 mg/mT.
						Terphenyl-d14 (Surr)	
					MS_568023 00042		100 cg/ mil
				.   -	MS-568033 00026	m F	200 dg/mT.
_	_	_	_	_			

Lab Name: TestAmerica Denver

SDG No.:

				0 0 0 0	Parent Reagent		
	о х Е	Prep	Dilutant	Final		Volume	
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added Analyte	Concentration
					MS-569730 HSL 00007	1 mL 3,3'-Dichlorobenzidine	200 ug/mL
						2 mL Benzoic acid	
					MS-569732 HSL 00005	1 mL Atrazine	
					I	Caprolactam	
					MS-571995 00001	2 mL 1,1'-Biphenyl	200 ug/mL
						1,2,4-Trichlorobenzene	200 ug/mL
						1,2-Dichlorobenzene	
						1,2-Diphenylhydrazine	202.195 ug/mL
						1,3-Dichlorobenzene	
						1,3-Dinitrobenzene	
						1,4-Dichlorobenzene	200 ug/mL
						1,4-Dioxane	200 ug/mL
						1-Methylnaphthalene	
						2,2'-oxybis[1-chloropropane]	200 ug/mL
						2, 3, 4, 6-Tetrachlorophenol	200 ug/mL
						2,4,5-Trichlorophenol	
						Z, 4, 6-Trichlorophenol	
						2,4-Dichlorophenol	
						2,4-Dimethylphenol	200 ug/mL
						Z,4-Dinitrophenol	
						2,4-Dinitrotoluene	
						2,6-Dichlorophenol	Z00 ug/mL
						2.6-Dinitrotoluene	Z00 ug/mL
						2-Chlorophenol	200 ug/mI,
						2-Methvlnaphthalene	
						2-Methylphenol	
						2-Nitroaniline	
						2-Nitrophenol	200 ug/mL
						3 & 4 Methylphenol	
						3-Nitroaniline	200 ug/mL
						4,6-Dinitro-2-methylphenol	400 ug/mL
						4-Bromopnenyl pnenyl etner	700 nd/mT
						4-CiiiOIO-3-iiieCiiy ipiiGiiOI	200 ug/mL.
						4-Chlorophenyl phenyl ether	
						7	
						4-Nitrophenol	
						Acenaphthene	200 ug/mL
						Acenaphthylene	200 ug/mL
						Acetophenone	200 ug/mL
						Aniline	200 ug/mL
						Anthracene	200 ug/mL
						Azobenzene	
						Benzo[a]anthracene	200 ug/mL
						Benzo[a]pyrene	200 ug/mL
		_				Benzo[b]tluoranthene	Tm/bn 002

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

					- 1		
			Read	Reagent	rarent neagent	T	
Reagent ID	Exp Date	Prep Date	Dilutant Fi	Final Volume	Reagent ID Added	e A Analyte	Concentration
						ם סמים (יי ל א יי) רי מים מים (יי ל א יי) היים מים (יי ל א יי)	7m/ 2000
						Benzo[k]f]noranthene	
						Benzyl alcohol	
						Bis (2-chloroethoxy) methane	
						Bis (2-chloroethyl) ether	200 ug/mL
						Bis(2-ethylhexyl) phthalate	
						ן ת	
						Chrysene	
							200 ug/mL
						Di-n-octyl phthalate	
						Dibenz (a,h) anthracene	200 ug/mL
						Dibenzofuran	200 ug/mL
						Diecnyl phonalace	700 ng/mr
						Dimechyl phrhade	
						Fluoranthene	- 1
						Fluctanicnonic	
						Hexachlorobenzene	
						Hexachlorobutadiene	
						Hexachlorocyclopentadiene	
						Hexachloroethane	
						Indeno[1,2,3-cd]pyrene	
						Isophorone	200 ug/mL
						N-Nitrosodi-n-propylamine	
						N-Nitrosodimethylamine	
						N-Nitrosodiphenylamine	200 ug/mL
						Naphthalene	
						Nitrobenzene	
						Pentachlorophenol	
						Phenanthrene	200 ug/mI
						Pixono	200 ug/mi
						Pyridine	
MS-567685 00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)	2,4,6-Tribromophenol (Surr)	
						2-Fluorophenol (Surr)	
						Nitrobenzene-d5 (Surr)	5000 ug/mL
						Phenol-d5 (Surr)	5000 ug/mL
						Terphenyl-d14 (Surr)	5000 ug/mL
MS-568023 00042	05/31/19		Restek, Lot A0127668		(Purchased Reagent)	Famphur	2000 ug/mL
MS-568033 00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)	Alachlor	4000 ug/mL
MS-569730 HSL 00007	11/30/18		Restek, Lot A0127472			3,3'-Dichlorobenzidine	2000 ug/mL
	06/30/18		Lot A0123		1	Benzoic acid	
MS-569732 HSL 00005	11/30/18		Lot A0127			Atrazine	2000 ug/mL
						Caprolactam	2000 ug/mL
MS-571995_00001	09/30/18		Restek, Lot A0125805		(Purchased Reagent)	1,1'-Biphenyl	
						1,2,4,5-Tetrachlorobenzene	1000 ng/mL

Lab Name: TestAmerica Denver Job No.: 320-39023-1

				4 0 0 0	Parent Reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
					-		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	
		_					1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
		_					1,3-Dinitrobenzene	1000 ug/mL
		_					1,4-Dichlorobenzene	1000 ug/mL
		_					1,4-Dioxane	
							1-Methylnaphthalene	
		_					2,2'-oxybis[1-chloropropane]	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	
							2,4,6-Trichlorophenol	
							2,4-Dichlorophenol	
							2,4-Dimethylphenol	
							2/4-Dinitrophenol	7000 ug/mL
							2 4 Dinit Clocolucine	- 1
							2.6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	
							2-Chlorophenol	
		_					2-Methylnaphthalene	
							2-Methylphenol	
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	
		_					3 & 4 Methylphenol	
							3-Nitroaniline	
		_					4,6-Dinitro-2-methylphenol	2000 ug/mL
		_					4-Bromophenyl phenyl ether	
								1000 ug/mL
		_					4-Chloroaniline	
							4-Chlorophenyl phenyl ether	
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	
							Acenaphthene	1000 ug/mL
							Acenaphthylene	
							Acetophenone	
							Aniline	- 1
		_					Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
		_					Benzo[a]anthracene	
							Benzo[a]pyrene	
		_					Benzo[b]fluoranthene	- 1
							Benzo[g,h,i]perylene	1000 ug/mL
								1000 ug/mL
		_					Benzyl alcohol	
		_					Bis(2-chloroethoxy)methane	
							Bis(2-chloroethyl)ether	
_				_			Bis(2-ethylhexyl) phthalate	1000 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

				Reagent	Farent Reagent			
	дхэ	Prep	Dilutant	Final		Volume		
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	A	Concentration
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
								1000 ug/mL
							Di-n-octyl phthalate	
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	
							Diphenylamine	850 ug/mL
							Fluoranthene	
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	
							Naphthalene	1000 ug/mL
							Nitrobenzene	
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	
							Phenol	
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019	50 mL	1,4-Dichlorobenzene-d4	400 ng/mL
			157164					
							Acenaphthene-dl0	400 ug/mL
							CIII y selle-uiz	
							Naphthalene-d8	
							Perytene-diz	400 ug/mr
WS_E67684 00010	00/10/10		DOC+10 TO+ 20110000		(B:: 20 )	+	FIIEIIAIICIII EIIE - AIO	
	04 / 10 / 10		10C DOI		tarciiasea Maaga	110)	A Consubthone A10	2000 ug/mT.
							Acemaphicmene ato	
							Namhthalono-18	
							Dory one A12	2000 ug/mT
							Dhenanthrene-d10	
		⊣⊦			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 1 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
MS-HSLA200_00035	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-HSLA_STK_00040	500 uL	2,4,6-Tribromophenol (Surr)	200 ug/mL
			0 r 0 H 0 H 0 H				2-Fluorobiphenvl	200 ug/mL
							2-Fluorophenol (Surr)	
							. LO	200 ug/mL
							1_	200 11g/mT.
							Terrhenvl-d14 (Surr)	200 ag/mT.
_	_	_	_	_				

Lab Name: TestAmerica Denver

SDG No.:

Job No.: 320-39023-1

200 ug/mL ng/mL 200 ug/mL 200 ug/mL ng/mL ng/mL ng/mL ng/mL ng/mL ng/mL ng/mL ng/mL 202.195 ug/mL 200 ug/mL 200 ug/mL Concentration 200 ug/mL 200 ug/mL ng/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 400 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 400 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL ng/mL 200 ug/mL 200 ug/mL nd/mr 200 1-Methylnaphthalene
2,2'-oxybis[1-chloropropane]
2,3,4,6-Tetrachlorophenol
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Chichlorophenol 4-Chlorophenyl phenyl ether Caprolactam
1,1'-Biphenyl
1,2,4,5-Tetrachlorobenzene 4,6-Dinitro-2-methylphenol 4-Bromophenyl phenyl ether 4-Chloro-3-methylphenol 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 3,3'-Dichlorobenzidine 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dichlorophenol 2,6-Dinitrotoluene 2-Chloronaphthalene 2-Methylnaphthalene Analyte Azobenzene Benzo[a]anthracene & 4 Methylphenol 2,4-Dimethylpheno 4-Chloroaniline 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Acenaphthylene 2-Methylphenol 2-Chloropheno 2-Nitrophenol Benzoic acid 4-Nitropheno Acetophenone Acenaphthene 1,4-Dioxane Anthracene Atrazine Aniline Volume Added Parent Reagent Reagent ID Volume Reagent Final Dilutant Used Prep Date Exp Date Reagent ID

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

					+000000		
				Reagent	heageil L		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final	Neagent ID	Volume Added Analyte	Concentration
						Benzo[a]pyrene	200 ug/mL
						Benzo[b]fluoranthene	
						Benzo[g,h,i]perylene	200 ug/mL
						Benzo[k]fluoranthene	200 ug/mL
						Benzyl alcohol	200 ug/mL
						Bis (2-chloroethoxy) methane	200 ug/mL
						Bis (2-chloroethyl) ether	200 ug/mL
						Bis (2-ethylhexyl) phthalate	200 ug/mL
						Carbazole	
						Di-n-butyl phthalate	200 ug/mL
						Di-n-octyl phthalate	200 ug/mL
						Dibenz (a,h) anthracene	
						Dibenzofuran	200 ug/mL
						Diethyl phthalate	200 ug/mL
						Dimethyl phthalate	200 ug/mL
						Diphenylamine	170 ug/mL
						Fluoranthene	200 ug/mL
						Fluorene	200 ug/mL
						Hexachlorobenzene	200 ug/mL
						Hexachlorobutadiene	200 ug/mL
						Hexachlorocyclopentadiene	200 ug/mL
						Hexachloroethane	200 ug/mL
						Indeno[1,2,3-cd]pyrene	200 ug/mL
						Isophorone	200 ug/mL
						N-Nitrosodi-n-propylamine	200 ug/mL
						N-Nitrosodimethylamine	200 ug/mL
						N-Nitrosodiphenylamine	
						Naphthalene	
						Nitrobenzene	200 ug/mL
						Pentachlorophenol	400 ug/mL
						Phenanthrene	200 ug/mL
						Phenol	
						Pyrene	200 ug/mL
							400 ug/mL
					MS-IS_00013	50 uL 1,4-Dichlorobenzene-d4	
						Acenaphthene-d10	40 ug/mL
						Chrysene-d12	40 ug/mL
						Naphthalene-d8	40 ug/mL
						Perylene-d12	40 ng/mL
						Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00040	06/30/18	01/30/18	Methylene Chloride, Lot	10 mL	MS-567685_00004	0.4 mL 2,4,6-Tribromophenol (Surr)	200 ug/mL
			L0101				Tm/ 2011
						Z-Fluorobiphenyl	200 ug/mL
						Dhonol-da (surr)	200 ug/mL
_	_	_		_	_		TIII / 60 007

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

Reagent ID Date Date Date Date Date Date Date Date Date	ate	Dilutant	Final Volume	Reagent ID MS-568023 00042 MS-568033 00026 MS-569730 HSL 00007 MS-569731 00070 MS-569732 HSL 00005 MS-571995 00001	Volume Added Terphenyl-d14 (Surr)  1 mL Famphur 0.5 mL Alachlor 1 mL Strazine 1 mL Atrazine 2 mL Atrazine 2 mL L'1'-Biphenyl 1,2'4-5-Tetrachlorobenzene 1,2'4-Trichlorobenzene 1,2'4-Trichlorobenzene 1,2'4-Trichlorobenzene 1,2-Dichlorobenzene 1,3-Dinitrobenzene 1,3-Dinitrobenzene 1,3-Dinitrobenzene 1,3-Dinitrobenzene 1,3-Dinitrobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	Concentration 200 ug/mL
Date Date	ate	Used		Reage 568023 56873 569731 569731 571995		Concentration  200 ug/mL
			[6] [6] [6] [6] [6]	568023 568033 569730 569731 571995	L L L L L L L L L L L L L L L L L L L	200 ug/mL 200 ug/mL 200 ug/mL 400 ug/mL 400 ug/mL 200 ug/mL
				568023 568033 569730 569731 571995	HI WILL WILL	200 ug/mL 200 ug/mL
					HI H	200 ug/mL 200 ug/mL 400 ug/mL 200 ug/mL
			4 4 H		THE HE	200 ug/mL 400 ug/mL 200 ug/mL
			ed   ed     ped	MS-569731 00070 MS-569732 HSL_00005 MS-571995_00001	THE THE	400 ug/mL 200 ug/mL
			e   h	MS-569732 HSL_00005 MS-571995_00001	TE E	200 ug/mL 200 ug/mL
			[Fed	MS-571995_00001	뒽	200 ug/mL 200 ug/mL
			A	MS-571995_00001	I I	200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 202.195 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,2,4,5-Tetrachlorobenzene 1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	200 ug/mL 200 ug/mL 200 ug/mL 202.195 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	200 ug/mL 202.195 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	202.195 ug/mL 202.195 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene	202.195 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,3-Dichlorobenzene 1,3-Dinitrobenzene 1,4-Dichlorobenzene 1.4-Dioxane	200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,3-Dinitrobenzene 1,4-Dichlorobenzene 1.4-Dioxane	200 ug/mL 200 ug/mL 200 ug/mL 200 ug/mL
					1,4-Dichlorobenzene	200 ug/mL 200 ug/mL 200 ug/mL
					1.4-Dioxane	200 ug/mL 200 ug/mL
					);;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	200 ug/mI
			_		1-Methylnaphthalene	
				_	2,2'-oxybis[1-chloropropane]	200 ug/mL
					2,3,4,6-Tetrachlorophenol	200 ug/mL
		_			2,4,5-Trichlorophenol	
					2,4,6-Trichlorophenol	200 ug/mL
					2,4-Dichlorophenol	200 ug/mL
					2,4-Dimethylphenol	200 ug/mL
					2,4-Dinitrophenol	
					2,4-Dinitrotoluene	200 ug/mL
					2,6-Dichlorophenol	200 ug/mL
					2,6-Dinitrotoluene	200 ug/mL
					2-Chloronaphthalene	
					2-Chlorophenol	
					2-Methylnaphthalene	200 ug/mL
					2-Methylphenol	200 ug/mL
					2-Nitroaniline	200 ug/mL
					2-Nitrophenol	
					3 & 4 Methylphenol	
					3-Nitroaniline	7m/bn 007
					-mernyrp	
					4-Bromophenyl pnenyl etner	
						Z00 ug/
					(1)	200 ug/mL
					4-Chlorophenyl phenyl ether	
					4-Nitroaniline	
					4-Nitrophenol	400 ng/mL
					Acenaphthene	200 ug/mL
					Acenaphthylene	200 ug/mL
					Acetophenone	
					Aniline	200 ug/mL
					Anthracene	200 ug/mL
	_		_	_	Azobenzene	200 ug/mL

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

SDG No.:

Regigno						Parent Reagent		
December   Decembe		EXD	Prep		eagent			
Return of a light receive   200		Date	Date		olume	ID	Analyte	Concentration
Beautool   Education							Benzo[a]anthracene	
Secret   Continuo number   Secret   Secret   Continuo number   Substituti   Subst							Benzo[a]pyrene	
Bentoo(R) 2.00   Bent							Benzo[b]fluoranthene	
Bearrol   Albohol							Benzo[g,h,i]perylene	
Bis (2-ch) Corocteboxy) sections 200   Bis (2-ch) Corocteby) section 200   Carbacalo Bis (2-ch) Carbacalo Bis (							Benzo[k]fluoranthene	
Ris (2-chicrocethus), pitchase   200							Benzyl alcohol	
Bit S_c=chirch[1]							Bis (2-chloroethoxy) methane	
House, Denogy, Day, Day, Day, Day, Day, Day, Day, Da							Bis(2-chloroethyl)ether	
Carboacola pitthalate   200   Carb							Bis(2-ethylhexyl) phthalate	
Chrysene   Chrysene   200							Butyl benzyl phthalate	200 ug/mL
Charles   Char							Carbazole	
Di-m-octyl pithalate   200   Di-m-octyl pit								
Disparcy (A) pitthalate   200							Di-n-butyl phthalate	200 ug/mL
Disease (a particular (a particular)   Disease (a particular)   Disea							Di-n-octyl phthalate	
Disetty  pittalate   200							Dibenz (a, h) anthracene	
Dimethy1 pitchalate							Dibenzofuran	
Diplemylamine							Dietnyl phthalate	
Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elucrathtene   Elecachlorobtadiene   Elecachlorobtadiene   Elecachloropentadiene   Elucropentadiene   Elucrope							Dimetnyl phthalate	
Public Part							Ulphenylamine	
Hexachloroberache   Hexachloroberache   Hexachloroberache   Hexachloroberache   Hexachloroberache   Hexachlorocyclogentadiene   Hexachlorocyclogentadiene   Hexachlorocyclogentadiene   Hexachlorocyclogentadiene   Hexachlorocyclogentadiene   Hexachlorocyclogentadiene   Inchesion							Fluoranthene	
Hexachlocoberaces   Hexachlocoberaces							Fluorene	
Hexachlocockradiene   Hexachlocockradiene							Hexachlorobenzene	
Hexachlorocethane   Hexachlorocethane							Hexachlorobutadiene	200 ug/mL
Hexacollorcetrane   Hexacollorcetrane							Hexachlorocyclopentadiene	200 ug/mL
Indemo[1,2,3-cd]pyrene   Indemo[1,2,3-cd]pyrene							Hexachloroethane	200 ug/mL
Inspire the continue of the							Indeno[1,2,3-cd]pyrene	
N-Nitroscoll-n-propylamine   N-Nitroscoll-n-propylamine							Isophorone	
Nation							N-Nitrosodi-n-propylamine	200 ug/mL
N-Witcosodiphenylamine   N-Witcosodiphenylamine							N-Nitrosodimethylamine	200 ug/mL
Nitroberose							N-Nitrosodiphenylamine	
Nutrobenzene   Nutrobenzene							Naphthalene	
Pendanthrene   Pend							Nitrobenzene	
Pyridine							Pentachlorophenol	
01/30/19 Restek, Lot A0130500 (Purchased Reagent) 2,4,6-Tribromophenol (Surr) 2-Fluorobiphenyl 2-Fluorophenol (Surr) 2-Fluorophenol (Surr) 2-Fluorophenol (Surr) 2-Fluorophenol (Surr) 2-Fluorophenol (Surr) 2-Fluorophenol (Surr) 3-Fluorophenol							Dhanol	
01/30/19   Restek, Lot A0130500   Purchased Reagent)   2,4,6-Tribromophenol (Surr)							Divene	
01/30/19   Restek, Lot A0130500   Purchased Reagent)   2,4,6-Tribromophenol (Surr)							Pyridine	
C-Fluorobiphenyl   C-Fluorophenol (Surr)	7685 00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)	1	
2-Fluorophenol (Surr)   Nitrobenzene-d5 (Surr)	I							
Nitrobenzene-d5 (Surr)   Phenol-d5 (Surr)   Perphenyl-d14 (Surr)   Pramphur   Pamphur   Pamphur   Pramphur   P							2-Fluorophenol (Surr)	5000 ug/mL
00042         05/31/19         Restek, Lot A0127668         (Purchased Reagent)         Famphur         Perphenyl-d14 (Surr)           60026         06/30/19         Restek, Lot A0133057         (Purchased Reagent)         Alachlor         Alachlor           HSL 0007         11/30/18         Restek, Lot A0123819         (Purchased Reagent)         3'-Dichlorobenzidine           00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Atrazine           HSL_00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine								
00042         05/31/19         Restek, Lot A0127668         (Purchased Reagent)         Famphur         Alachlor           00026         06/30/19         Restek, Lot A0133057         (Purchased Reagent)         Alachlor         Alachlor           HSL 00007         11/30/18         Restek, Lot A0123819         (Purchased Reagent)         3,3'-Dichlorobenzidine           00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Atrazine           HSL 00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine							Phenol-d5 (Surr)	
00042         05/31/19         Restek, Lot A0127668         (Purchased Reagent)         Famphur           00026         06/30/19         Restek, Lot A0133057         (Purchased Reagent)         Alachlor           HSL 00007         11/30/18         Restek, Lot A0127472         (Purchased Reagent)         3,3'-Dichlorobenzidine           00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Atrazine           HSL_00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine								
00026         06/30/19         Restek, Lot A0133057         (Purchased Reagent)         Alachlor           HSL 00007         11/30/18         Restek, Lot A0127472         (Purchased Reagent)         3,3'-Dichlorobenzidine           00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Benzoic acid           HSL_00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine		05/31/19		Lot A012			Famphur	2000 ug/mL
HSL 00007         11/30/18         Restek, Lot A0127472         (Purchased Reagent)         3,3'-Dichlorobenzidine           00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Benzoic acid           HSL_00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine		06/30/19		Lot A013			Alachlor	4000 ng/mL
00070         06/30/18         Restek, Lot A0123819         (Purchased Reagent)         Benzoic acid         Atrazine           HSL_00005         11/30/18         Restek, Lot A0127580         (Purchased Reagent)         Atrazine         Atrazine		30/		Lot A012			3,3'-Dichlorobenzidine	2000 ug/mL
HSL_00005   11/30/18   Restek, Lot A0127580   (Purchased Reagent) Atrazine		06/30/18		Lot A012		(Purchased Reagent)	Benzoic acid	2000 ug/mL
		11/30/18		Lot A012		(Purchased Reagent)	Atrazine	2000 ug/mL

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			() () () ()	Parent Reagent		
Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID Ad	Volume Added Analyte	Concentration
					Caprolactam	2000 ug/mL
09/30/1	8	Restek, Lot A0125805		(Purchased Reagent)	1,1'-Biphenyl	
					1,2,4,5-Tetrachlorobenzene	
					1,2,4-Trichlorobenzene	- 1
					1,2-Dichlorobenzene	- 1
					1,2-Diphenylhydrazine	- 1
					1,3-Dichlorobenzene	
					1,3-Ulnitrobenzene	
					1,4-Dichlorobenzene	- 1
					1,4-Dioxane	
					1-Methylnaphthalene	- 1
					2,2'-oxybis[1-chloropropane	
					2, 3, 4, 6-Tetrachlorophenol	- 1
					2,4,5-Trichlorophenol	- 1
					2,4,6-Trichlorophenol	1000 ug/mL
					2,4-Dichlorophenol	1000 ug/mL
					2,4-Dimethylphenol	1000 ug/mL
					2,4-Dinitrophenol	
					2,4-Dinitrotoluene	
					2,6-Dichlorophenol	
					2,6-Dinitrotoluene	
					2-Chloronaphthalene	
					2-Chlorophenol	
					2-Methylnaphthalene	
					2-Methylphenol	
					2-Nitroaniline	1000 ug/mL
					2-Nitrophenol	1000 ug/mL
					3 & 4 Methylphenol	1000 ug/mL
					3-Nitroaniline	1000 ug/mL
					4,6-Dinitro-2-methylphenol	2000 ug/mL
					4-Bromophenyl phenyl ether	1000 ug/mL
					4-Chloro-3-methylphenol	1000 ug/mL
					4-Chloroaniline	1000 ug/mL
					4-Chlorophenyl phenyl ether	
					4-Nitroaniline	
					4-Nitrophenol	- 1
					Acenaphthene	1000 ug/mL
					Acenaphthylene	1000 ug/mL
					Acetophenone	1000 ug/mL
					Aniline	1000 ug/mL
					Anthracene	1000 ug/mL
					Azobenzene	1000 ug/mL
					Benzo[a]anthracene	1000 ug/mL
					Benzo[a]pyrene	1000 ug/mL
					Benzo[b]fluoranthene	1000 ug/mL
					Benzo[g,h,i]perylene	1000 ug/mL
					Benzo[k]fluoranthene	1000 ug/mL
					Benzyl alcohol	1000 11g/mT,

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				+ 2000 2000 2000 2000 2000 2000 2000 20	Parent Reagent	٠,		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Bis(2-chloropthoxu)methane	1000 11g/mT.
							Bis (2-chlorothm) other	
							Bis (2 CHIOCCHY) CHICL	
							BIS(2-ecniginesgi) phicharace	
							Ducyi Delizyi pilcilarace	1000 ug/mT
							Calbazole	1000 ag/iiii
							Chrysene	IUUU ug/mL
							Di-n-octyl phthalate	
							Dibenz (a,h) anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019	20 mL	1,4-Dichlorobenzene-d4	400 ug/mL
		1					Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	nt)	1,4-Dichlorobenzene-d4	2000 ug/mL
I	-						Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00154	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-IS_00013	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
		1	01040				Acenaphthene-d10	40 ug/mL
							Thrusana - A12	40 17 /mT.
_	_	_	_	_	_			

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Added Added Added Added A Reagent)  200 uL  200 uL  2 mL						Parent Readent		
Date Date Date Date Date Date Date Date		<u>}</u>	, ,	÷ ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	Reagent		( (	
06/22/18 06/22/17 Methylene Chloride, Lot 250 mL MS-567684_00019 50 mL 157164		Exp Date	Frep Date	Dilucanic Used	Volume	DI	Added Analyte	Concentration
06/22/18 06/22/17 Wethylene Chloride, Lot 250 mL MS-567684_00019 50 mL 157164							Naphthalene-d8	40 ug/mL
07/31/20 Restek, Lot A0112833 (Furchased Reagent) 07/31/20 Restek, Lot A0112833 (Furchased Reagent) 06/22/18 04/03/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL							Perylene-d12	
06/22/18   06/22/17   Methylene Chloride, Lot A0112833 (Purchased Reagent)  07/31/20   Restek, Lot A0112833 (Purchased Reagent)  06/22/18   04/03/18   Wethylene Chloride, Lot   0.5 mL MS-HSLA_STK_00040   200 uL    181545   181545   181545   181545   181545   10 mL MS-567685_00004   0.4 mL    MS-571995_00001   2 mL    MS-571995_0								40 ug/mL
06/22/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545	0001	06/22/18		Chloride,	mL	MS-567684_00019		400 ug/mL
06/32/18 04/03/18 Methylene Chicride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL				7 O H O H			Acenaphthene-d10	400 ug/mL
07/31/20 Restek, Lot A0112833 (Purchased Reagent) 06/22/18 04/03/18 Methylene Chloride, Lot 0.5 ml MS-HSIA_STK_00040 200 ul 181545							Chrysene-d12	400 ug/mL
06/22/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 101/30/18 Methylene Chloride, Lot 10 mL MS-571995_00004 0.4 mL MS-571995_00001 2 mL							Naphthalene-d8	
06/22/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSIA_STK_00040 200 uL 181545							Perylene-d12	400 ug/mL
07/31/20 Restek, Lot A0112833 (Furchased Reagent) 06/22/18 04/03/18 Wethylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545 06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL								
06/32/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545	.MS-567684_00019	07/31/20		Lot A0112				
06/32/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545							Acenaphthene-d10	
06/30/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545 06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL							Chrysene-d12	2000 ug/mL
06/22/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545							Naphthalene-d8	2000 ug/mL
06/30/18 04/03/18 Methylene Chloride, Lot 0.5 mL MS-HSLA_STK_00040 200 uL 181545							Perylene-a12	
06/30/18 04/03/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL		0	0				Phenanthrene-dl0	
06/30/18   01/30/18   Methylene Chloride, Lot   10 mL   MS-567685_00004   0.4 mL   181545	S-HSLACCV080_00154	06/22/18	04/03/18		립	MS-HSLA_STK_00040		Tm/6n 08
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545				)			2-Fluorobiphenyl	80 ug/mL
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL							2-Fluorophenol (Surr)	1m/mr
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Nitrobenzene-d5 (Surr)	80 ng/mF
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							ы	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Terphenyl-d14 (Surr)	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL							1,4-Dichlorobenzene	- 1
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL MS-571995_00001 2 mL							2,4,5-Trichlorophenol	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545 MS-571995_00001 Z mL							2,4,6-Trichlorophenol	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							2,4-Dinitrotoluene	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545 MS-571995_00001 2 mL							2-Methylphenol	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545 MS-571995_00001 Z mL							3 & 4 Methylphenol	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Hexachlorobenzene	
06/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Hexachlorobutadiene	Jm/gu 08
06/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Ni + robenzene	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Pentachlorophenol	
06/30/18 01/30/18 Methylene Chloride, Lot 10 mL MS-567685_00004 0.4 mL 181545							Pyridine	
MS-571995_00001 2 mL	MS-HSLA_STK_00040	06/30/18	01/30/18		10 mL	MS-567685_00004	mL	200 ug/mL
2 mL				) † † 1 1 1 1 1			2-Fluorobiphenyl	200 ug/mL
2 m.							2-Fluorophenol (Surr)	
2 m							Nitrobenzene-d5 (Surr)	200 ug/mL
22 BT							Phenol-d5 (Surr)	200 ug/mL
7 m 7								200 ug/mL
						MS-571995_00001		200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
N   Q   (1)							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dinitrotoluene	- 1
							2-Methylphenol	
		_			_		3 & 4 Methylphenol	Tm/bn noz

Lab Name: TestAmerica Denver

Job No.: 320-39023-1 SDG No.:

					Parent Reagent			
				Reagent	- 1			
	d x x	Prep	Dilutant	Final		Volume	F	-
Reagent ID	Date	Date	Used	Volume	Reagent ID	Added	Analyte	
							Hexachlorobenzene	
							Hexachlorobutadiene	200 ug/mL
							Hexachloroethane	
							Nitrobenzene	
							Fentachlorophenol	- 1
	1		1					- 1
MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)	nt)	2,4,6-Tribromophenol (Surr)	- 1
							:>\	5000 ug/mL
							ات	- 1
							Nitrobenzene-d5 (Surr)	- 1
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14 (Surr)	5000 ug/mL
MS-571995_00001	09/30/18		Restek, Lot A0125805		(Purchased Reagent)	nt)	1,4-Dichlorobenzene	
							2,4,5-Trichlorophenol	
							2,4,6-Trichlorophenol	- 1
							2,4-Dinitrotoluene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Nitrohensene	1000 11g/mT.
							Pentachlorophenol	
							Pvridine	
						- 11	)	- 11
MS-HSLB1B3SSV_00046	06/22/18	04/03/18	Methylene Chloride, Lot  181545	0.5 mL	MS-IS_00013	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	1
							Perylene-d12	
							Phenanthrene-d10	40 ug/mL
.MS-IS_00013	06/22/18	06/22/17	7 Methylene Chloride, Lot	250 mL	MS-567684_00019	20 mL	1,4-Dichlorobenzene-d4	400 ug/mL
			T2/T04				Arenaphthene-d10	400 11cm/mT.
							Chrysene-d12	
							Naphthalene-d8	
							Pervlene-d12	1
							Phenanthrene-d10	400 ug/mL
MS-567684 00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	nt)	1,4-Dichlorobenzene-d4	2000 ug/mL
1							Acenaphthene-d10	1
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
			-				Phenanthrene-d10	
MS-HSLB1B3SSV_00046	06/22/18	04/03/18	Methylene Chloride, Lot	0.5 mL	MS-HSLB1_STK_00010	250 uL	1,4-Dichlorobenzene	100 ug/mL
			H D H				2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
_	-	_	-	=	-			-

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Readent T					Daront Daagont	+		
			!	Reagent	- 1	- 1		
	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							2,4-Dinitrotoluene	100 ug/mL
							2-Methylphenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	
							Pyridine	
.MS-HSLB1_STK_00010	06/30/18	81/90/80	Methylene Chloride, Lot	10 mL	MS-571995.SEC_00001	2 mL	1,4-Dichlorobenzene	200 ug/mL
			) 1 1 1 1 1				2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2-Methylphenol	
							3 & 4 Methylphenol	
							Hexachlorobenzene	
							Hexachlorobutadiene	
							Hexachloroethane	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Pyridine	- 1
MS-571995.SEC_00001	07/31/18		Restek, Lot A0124300		(Purchased Reagent)	ent)	1,4-Dichlorobenzene	
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	
							2,4-Dinitrotoluene	
							W W	
							3 & 4 Methylphenol	- 1
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	
							Hexachloroethane	
							Nıtrobenzene	
							Pentachlorophenol	
							Pyridine	2000 ug/mL
MS-HSLB2SSV_00043	06/02/18	04/03/18	Methylene Chloride, Lot 157164	0.5 mL	MS-IS_00013	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
			1 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Acenaphthene-d10	40 ug/mL
							Chrysene-d12	
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00013	06/22/18	06/22/17	Methylene Chloride, Lot	250 mL	MS-567684_00019	20 mL	1,4-Dichlorobenzene-d4	400 ng/mI
			13/164				Acenaphthene-d10	400 ua/mL
							Chrysene-d12	400 11g/mT,
							Naphthalene-d8	
							Pervlene-d12	400 ug/mL
							Phenanthrene-d10	400 11g/mT.

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				Reagent	Farent Reagent		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Volume Reagent ID Added	Analyte	Concentration
MS-567684 00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	1,4-Dichlorobenzene-d4	2000 ug/mL
I		_				Acenaphthene-d10	2000 ug/mL
		_				Chrysene-d12	2000 ug/mL
		_				Naphthalene-d8	2000 ug/mL
		_				Perylene-d12	2000 ug/mL
						Phenanthrene-d10	2000 ug/mL
MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot	250 mL	MS-567684_00019 5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
			181343			Acenaphthene-d10	400 ug/mL
						Chrysene-d12	
						Naphthalene-d8	400 ug/mL
						Perylene-d12	400 ug/mL
						$\rightarrow$	
					MS-567684_00020 45 mL		
						Acenaphthene-dl0	
						Chrysene-alz	
						Napilulatelle-do Pervlene-d12	400 ug/mL
						Phenanthrene-d10	
.MS-567684 00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)	1,4-Dichlorobenzene-d4	
I						Acenaphthene-d10	2000 ug/mL
		_				Chrysene-d12	2000 ug/mL
						Naphthalene-d8	
		_				Perylene-d12	2000 ug/mL
						Phenanthrene-d10	
.MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)	1,4-Dichlorobenzene-d4	
		_				Acenaphthene-d10	
		_				Chrysene-d12	
		_				Naphthalene-d8	
						Perylene-d12	2000 ug/mL
		- 11				בוופוומוו רווד פוופ – מדס	
MV-2cleve+AVA_00034	05/31/18	03/25/18	P&T Methanol, Lot 177891	10 mL	MV-568720_00020 202.5 uL	Acrolein	399.938 ug/mL
					MV-569723 00003 160 uL	2-Chloroethyl vinyl ether	40 ug/mL
					MV-569724_00014 160 uL	Vinyl acetate	1m/gn 08
.MV-568720 00020	05/31/18		Lot A013			Acrolein	19750 ug/mL
.MV-569723 00003	/31/		Lot A012		- 1	2-Chloroethyl vinyl ether	
.MV-569724_00014	07/31/18		RESTEK, Lot A0134268		(Purchased Reagent)	Vinyl acetate	2000 ng/mL
MV-2cleve+AVA_00035	05/31/18	05/07/18	P&T Methanol, Lot 177891	10 mL	MV-568720_00020   202.5 uL	Acrolein	399.938 ug/mL
					MV-569724_00014 160 uL	Vinyl acetate	
.MV-568720_00020	05/31/18		Lot A013		(Purchased Reagent)	Acrolein	19750 ug/mL
.MV-569724_00014	07/31/18		RESTEK, Lot A0134268		(Purchased Reagent)	Vinyl acetate	5000 ug/mL
MV-568718-D_00008	03/31/21		RESTEK, Lot A0118105		(Purchased Reagent)	1,4-Dichlorobenzene-d4	250 ug/mL
		_				Chlorobenzene-d5	250 ug/mL
						Fluorobenzene	
						TBA-d9 (IS)	2000 ng/mF

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					Parent Reagent	L .		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume		Volume Added	Analyte	Concentration
MV-568718-D_00014	05/31/22		RESTEK, Lot A0127975		(Purchased Reagent)	ent)	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene TBA-d9 (IS)	250 ug/mL 5000 ug/mL
MV-ARCH SS A 00090	06/21/18	12/21/17	P&T Methanol, Lot	100 mL	MV-567650 00027	10 mL	(7)	250 ug/mL
			177891		I		-	
							4-Bromofluorobenzene (Surr)	250 ug/mL 250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)	ent)	1,2-Dichloroethane-d4 (Surr)	
I								
							Dibromofluoromethane (Surr) Toluene-d8 (Surr)	2500 ug/mL 2500 ug/mL
MV-ARCH SS A_00096	11/12/18	05/12/18	P&T Methanol, Lot	20 mL	MV-567650_00027	2 mT	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
			H - C C / H				4-Bromofluorobenzene (Surr)	250 ug/mL
								250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)	ent)	<del></del>	
							Dibromofluoromethane (Surr)	2500 ug/mL
							(DULL)	2000 ag/ illi
MV-BFB_00025								
							<pre>1,2-Dichloroethene, Total (URS)</pre>	
							1,3-Dichloropropene, Total	
							Tentatively Identified	
							Compound Total RTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
- 1					MV-STS110N1 00066	1.25 mL	BFB	
.MV-STS110N1 00066	10/31/19	UIt	Ultra Scientific, Lot CH-3248Z	48Z	(Purchased Reagent)	ent)	BFB	2000 ug/mL
MV-Gas/Ket A_00071	09/04/18	03/04/18	P&T Methanol, Lot	10 mL	MV-569721_00004	128 uL	2-Butanone (MEK)	160 ug/mL
			H \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				2-Hexanone	160 ug/mL
							4-Methyl-2-pentanone (MIBK)	160 ug/mL
							Acetone	
					MV-569722_00006	160 uL	Bromomethane	
							Chloroethane	
							Chloromethane	40 ug/mL
							Dichlorodiliuoromethane	40 ug/mL
							Trichlorofluoromethane	
							Vinyl chloride	40 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

					- 1		
				Reagent	Parent Reagent		
		Prep	Dilutant Heed	Final			, , , , , , , , , , , , , , , , , , ,
Keagent ID	Date	Date	Used	volume	Keagent ID		Concentration
					540	uL Cyclohexanone	
.MV-569721_00004	01/31/20		RESTEK, Lot A0123890		(Purchased Reagent)	2-Butanone (MEK)	12500 ug/mL
						2-Hexanone	12500 ug/mL
						4-Methyl-2-pentanone (MIBK)	12500 ug/mL
						Acetone	12500 ug/mL
.MV-569722_00006	01/31/20		RESTEK, Lot A0124278		(Purchased Reagent)	Bromomethane	2500 ug/mL
						Chloroethane	2500 ug/mL
						Chloromethane	
						Dichlorodifluoromethane	2500 ug/mL
						Dichlorofluoromethane	2500 ug/mL
						Trichlorofluoromethane	2500 ug/mL
						Vinyl chloride	2500 ug/mL
.MV-569727 00006	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)	Cyclohexanone	25000 ug/mL
MV-Gas/Ket A_00073	11/07/18 05,	05/07/18	P&T Methanol, Lot	10 mL	MV-569721_00004 128 v	uL 2-Butanone (MEK)	160 ug/mL
			H 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			2-Hexanone	160 ug/mL
						4-Methyl-2-pentanone (MIBK)	160 ug/mL
						Acetone	
					MV-569722 00006 160 u	ul Bromomethane	40 ug/mL
					1	Chloroethane	40 ug/mL
						Chloromethane	40 11g/mT.
						Dichlorodif Inoromethane	
						ひょうしょう ない とう こう	
						サエCiitOtOt TaOt Oille Ciidiic	
						1/1 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	
					MV-569727 00006 640 r	uI. Cvclohexanone	
.MV-569721 00004	01/31/20		RESTEK, Lot A0123890		chased Reagent)	-	
I						2-Hexanone	
						4-Methyl-2-pentanone (MIBK)	
.MV-569722_00006	01/31/20		RESTEK, Lot A0124278		(Purchased Reagent)	Bromomethane	2500 ug/mL
						Chloroethane	2500 ug/mL
						Chloromethane	2500 ug/mL
						Dichlorodifluoromethane	2500 ug/mL
						Dichlorofluoromethane	
						Trichlorofluoromethane	- 1
						Vinyl chloride	2500 ug/mL
.MV-569727_00006	03/31/19		RESTEK, Lot A0118487		(Purchased Reagent)	Cyclohexanone	25000 ug/mL
MV-Gas/Ket B_00041	08/25/18 02,	02/25/18	P&T Methanol, Lot	10 mL	MV-569721.sec_00005 128 u	uL 2-Butanone (MEK)	160 ug/mL
			177891				
	1				097	ы	
.MV-569721.sec_00005	01/31/20		Lot A0113		(Purchased Reagent)	2-Butanone (MEK)	12500 ug/mL
.MV-569722.sec_00004	01/31/20		RESTEK, Lot A0124116		(Purchased Reagent)	Vinyl chloride	2500 ug/mL
MV-Gas/Ket B_00042	10/21/18 04,	04/21/18	P&T Methanol, Lot	10 mL	MV-569721.sec_00005 128 u	uL 2-Butanone (MEK)	160 ug/mL
					MV-569722.sec_00004 160 u	uL Vinyl chloride	40 ug/mL
.MV-569721.sec 00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)	2-Butanone (MEK)	12500 ug/mL
						-	

Lab Name: TestAmerica Denver

SDG No.:

				Д Ф Ф Ф Ф Ф Ф Ф	Parent Reagent	ıt		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final	Reagent ID	Volume Added	Analyte	Concentration
.MV-569722.sec_00004	01/31/20		RESTEK, Lot A0124116		(Purchased Reagent)	ent)	Vinyl chloride	2500 ug/mL
MV-Main A_00036	06/30/18	04/27/18	P&T Methanol, Lot	20 mL	MV-571992_00001	320 uL	1,1,1,2-Tetrachloroethane	40 ug/mL
			† ) )				1,1,1-Trichloroethane	
							1,1,2,2-Tetrachloroethane	40
							1,1,2-Trichloro-1,2,2-trifluor oethane	40 ug/mL
							1,1,2-Trichloroethane	40 ug/mL
							1,1-Dichloroethane	
							1,1-Dichloroethene	- 1
							1,1-Dichloropropene	40 ug/mL
							1,2,3-Trichloropropane	40 ug/mL
							1,2,4-Trichlorobenzene	
							1,2,4-Trimethylbenzene	40 ug/mL
							1,2-Dibromo-3-Chloropropane	
							1,2-Dichlorobenzene	
							1,2-Dichloroethane	- 1
							1,2-Dichloropropane	
							1,3,5-Trimethylbenzene	40 ug/mL
							1 3-Dichloropropane	
							1,4-Dichlorobenzene	
							1,4-Dioxane	
							2,2-Dichloropropane	
							2-Chlorotoluene	40 ug/mL
							2-Methyl-2-propanol	
							3-Chloro-1-propene	- 1
							4-Chlorotoluene	- 1
							4-Isopropyltoluene	
							Acrylonitrile	400 ug/mL
							Bromobensene	
							Bromoform	
							Carbon disulfide	
							Carbon tetrachloride	
							Chlorobenzene	40 ug/mL
							Chlorobromomethane	
							Chlorodibromomethane	- 1
							Chloroform	
							cis-1,2-Dichloroethene	40 ug/mL
							cis-1,3-Dichloropropene	
							Cyclohexane	
							Dibromomethane	
							Dichlorobromomethane	
							Ethyl ether	
							Ethyl methacrylate	40 ug/mL
			_	_			Ethylbenzene	40 ug/mr

Lab Name: TestAmerica Denver

Job No.: 320-39023-1

Exp Date Dilutant Used Used  12/31/18  Prep Date Used  12/31/18					D0000	Parent Reagent		
Explored and a	ID	Exp Date	Prep Date	Dilutant Used	Final Volume	QH		Concentration
Research   Research   40							Ethylene Dibromide	
Todometrane							Hexachlorobutadiene	
Total							Hexane	
Taggroupy  Engineer   1000							Iodomethane	
Methyl activeness							Isobutyl alcohol	
Methyl acease   Methyl acease   40							Isopropylbenzene	
Methyl tetr butyl tetr   40							m-Xylene & p-Xylene	
Methylogylohexane   40								
Methylencene								
Methylbenzene 40   Naphthalenene 40   Naththalenene 40   Naththalenenene 40   Naththalenenenenenenenenenenenenenenenenenenen							Methylcyclohexane	
N=Propylebracene							Methylene Chloride	
Na Propried Reader   Na Propried Reader							n-Butylbenzene	
National Continue							N-Propylbenzene	
SESTEK, Lot A0123711							Naphthalene	
Sec-Buttlbenzene							o-Xylene	
Stytene							sec-Butylbenzene	
Tetrachloroethene							Styrene	
Tetrachydroforethene							tert-Butylbenzene	
Toluene   Toluene   40							Tetrachloroethene	
Toluene   Toluene   40							Tetrahydrofuran	
Trans-1/2-Dichloroethene							Toluene	
Trians_1,3-Dichloroptopene   40							trans-1,2-Dichloroethene	
Trans-1,4-Dichloro-2-butene   40							trans-1,3-Dichloropropene	
Trichloroethene   40							trans-1,4-Dichloro-2-butene	
NW-CUS17739_00002   NW-CUS17739_00002   NW-CUS17739_00002   NW-CUS17731   NW-CUS17739_00002   NW-CUS17731   NW-CUS17731   NW-CUSI7731   NW-C							_	
RESTEK, Lot A0123711						00002 800		
RESTEK, Lot A0123711							2-Pentanone	
New Tebrity							sec-Butyl Alcohol	
1,1,1-Trichloroethane 2500 1,1,2,2-Tetrachloroethane 2500 1,1,2-Trichloro-1,2,2-trifluor 2500 ochane 1,1,2-Trichloroethane 2500 1,1-Dichloroethane 2500 1,1-Dichloropropene 2500 1,2,3-Trichlorobenzene 2500 1,2,3-Trichlorobenzene 2500 1,2,4-Trichlorobenzene 2500 1,2,4-Trimethylbenzene 2500 1,2-Dichlorobenzene 2500 1,2-Dichlorobenzene 2500 1,2-Dichlorobenzene 2500 1,2-Dichlorobenzene 2500 1,2-Dichloropropane 2500 1,2-Dichloropropane 2500 1,2-Dichlorobenzene 2500 1,2-Dichlorobenzene 2500 1,2-Dichlorobenzene 2500 1,3-Dichloropenane 2500 1,3-Dichloropenane 2500 1,3-Dichloropenane 2500 1,3-Dichloropenane 2500 1,3-Dichlorobenzene 2500		12/31/18		Lot A0123			1,1,1,2-Tetrachloroethane	
-Tetrachloroethane         2500           richloroethane         2500           hloroethane         2500           hloroethane         2500           hloroethane         2500           hloropropene         2500           richlorobenzene         2500           richloropane         2500           richloropane         2500           rimethylbenzene         2500           hlorobenzene         2500           hloroethane         2500           hloroethane         2500           rimethylbenzene         2500           rimethylbenzene         2500           rimethylbenzene         2500           rimethylbenzene         2500							1,1,1-Trichloroethane	
richloro-1,2,2-trifluor 2500 richloroethane 2500 hloroethane 2500 hloroethene 2500 hloroptopene 2500 richlorobenzene 2500 richlorobenzene 2500 richlorobenzene 2500 richlorobenzene 2500 rimethylbenzene 2500 hloroethane 2500							1,1,2,2-Tetrachloroethane	
richloroethane 2500 hloroethane 2500 hloroethane 2500 hloroptropene 2500 richlorobenzene 2500 richlorobenzene 2500 rimethylbenzene 2500 hlorobenzene 2500 hlorobenzene 2500 hloroethane 2500 hloroethane 2500 hloroethane 2500 hloroethane 2500 hloroptropane 2500 hloroethane 2500 hloroethane 2500 hloroptropane 2500 hloroptropane 2500 hloroptropane 2500							1,1,2-Trichloro-1,2,2-trifluor	2500
2500 2500 2500 2500 2500 2500 2500 2500							Oetnane 1 1 2-mrichloroethana	7500 mT/mT
2500 2500 2500 2500 2500 2500 2500 2500							1.1-Dichloroethane	2500 ug/mT.
2500 2500 2500 2500 2500 2500 2500 2500							1.1-Dichloroethene	
2500 2500 2500 2500 2500 2500 2500 2500							1,1-Dichloropropene	
2500 2500 2500 2500 2500 2500 2500 2500							1,2,3-Trichlorobenzene	2500 ug/mL
2500 2500 2500 2500 2500 2500 2500 2500							1,2,3-Trichloropropane	
2500 opane 2500 2500 2500 2500 2500 2500 2500 2500							1,2,4-Trichlorobenzene	
opane 2500 2500 2500 2500 2500 2500 2500 2500							1,2,4-Trimethylbenzene	2500 ug/mL
2500 2500 2500 ene 2500 2500							1,2-Dibromo-3-Chloropropane	2500 ug/mL
2500 ene 2500 2500							1,2-Dichlorobenzene	
ene 2500 2500							1,2-Dichloroethane	
ene 2500							1,2-Dichloropropane	
2500							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

62500 ug/mL 2500 ug/mL ng/mL ng/mL ug/mL ng/mL ng/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL :500 ug/mL :500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL Concentration 25000 ug/mL 25000 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL :500 ug/mL :500 ug/mL 2500 ug/mL 2500 ug/mL 2500 ug/mL 2000 ug/mL 2500 ug/mL cis-1,2-Dichloroethene cis-1,3-Dichloropropene Methyl tert-butyl ether Dibromomethane
Dichlorobromomethane
Ethyl ether
Ethyl methacrylate
Ethylbenzene
Ethylbenzene Chlorodibromomethane Chloroform Carbon tetrachloride 1,4-Dichlorobenzene 2,2-Dichloropropane Hexachlorobutadiene m-Xylene & p-Xylene Analyte 2-Methyl-2-propanol 4-Isopropyltoluene Chlorobromomethane 3-Chloro-1-propene Methylcyclohexane Methylene Chloride Carbon disulfide Isopropylbenzene Isobutyl alcohol 2-Chlorotoluene 4-Chlorotoluene N-Propylbenzene n-Butylbenzene Methyl acetate Acrylonitrile Chlorobenzene Bromobenzene Cyclohexane Iodomethane Naphthalene Bromoform Benzene Hexane Volume Added Parent Reagent Reagent ID Reagent Volume Final Dilutant Used Prep Date Exp Date Reagent ID

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ng/mL

2500 ug/mL 2500 ug/mL 2500 ug/mL ng/mL

2500 ug/mL

trans-1,2-Dichloroethene

tert-Butylbenzene Tetrachloroethene

Tetrahydrofuran

Toluene

sec-Butylbenzene

Styrene

ylene

2500 ug/mL

Lab Name: TestAmerica Denver

SDG No.:

				Reagent	rarent reagent			
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00002	07/31/19		Ultra, Lot CR-2819		(Purchased Reagent)	t)	1-Chlorohexane	1000 ng/mL
							2-Pentanone	4000 ug/mL
							sec-Butyl Alcohol	30000 ng/mL
MV-Main B 00020	07/25/18	01/25/18	╙	20 mL	MV-569720.sec 00002	320 uL	11,1-Dichloroethene	40 ug/mL
1			127999		I			
							1,2-Dichloroethane	40 ug/mL
							Benzene	40 ug/mL
							Carbon tetrachloride	
							Chlorobenzene	40 ug/mL
							Chloroform	40 ug/mL
							Tetrachloroethene	40 ug/mL
- 1					- 1	4	Trichloroethene	
.MV-569720.sec_00002	07/31/18		RESTEK, Lot A0120604		(Purchased Reagent)	t)	1,1-Dichloroethene	2500 ug/mL
							L, Z-DICIIIOLOGCIIAIIG	- 1
								- 1
							Carbon tetrachloride	
							Chlorobenzene	
							Chloroform	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Trichloroethene	2500 ug/mL
MV-Main B_00021	07/31/18	05/14/18	Pr. Methanol, Lot	20 mL	MV-569720.sec_00002	320 uL	1,1-Dichloroethene	40 ug/mL
			127999				C C C C C C C C C C C C C C C C C C C	
							I, Z-Dichloroethane	
							Benzene	
							Carbon tetrachloride	
							Chlorobenzene	
							Chloroform	40 ug/mL
							Tetrachloroethene	40 ug/mL
							Trichloroethene	- 1
.MV-569720.sec_00002	07/31/18		RESTEK, Lot A0120604		(Purchased Reagent)	t)	1,1-Dichloroethene	2500 ug/mL
							1,2-Dichloroethane	
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	
							Chloroform	- 1
							Tetrachloroethene	2500 ug/mL
							Trichloroethene	2500 ug/mL
MV-Supp A 00029	06/30/18	03/04/18	3 P&T Methanol, Lot 12799	10 mL	mv-570808 00003	160 uL	1,2,3-Trimethylbenzene	40 ug/mL
					I		2-Chloro-1,3-butadiene	40 ug/mL
							2-Nitropropane	1m/bn 08
							Isopropyl alcohol	
							Methacrylonitrile	
							-	
		_	_	_	111/23/0803 111/23/0803	TO OUT	⊾tnyı acetate	mu/bn os

Job No.: 320-39023-1 Lab Name: TestAmerica Denver

				Reagent	Parent Reagent	t		
Reagent ID	Exp Date	Prep Date	Dilutant Used	Final Volume	Reagent ID	Volume Added	Analyte	Concentration
							Methyl methacrylate	1m/mr
					mv-571993 00001	160 uL		400 ug/mL
					l		Isopropyl ether	40 ug/mL
							Propionitrile	400 ug/mL
							Tert-amyl methyl ether	40 ug/mL
							Tert-butyl ethyl ether	40 ug/mL
					mv-571994 00001	240 uL		2400 ug/mL
					mv-VO-TAOH-5 00004	800 uL	cis-1,4-Dichloro-2-butene	1m/bn 08
.mv-570808 00003	06/30/18		Restek, Lot A0123685		(Purchased Reagent)	ent)	1,2,3-Trimethylbenzene	2500 ug/mL
I							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	2000 ng/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.mv-570809_00003	06/30/18		Restek, Lot A0123728		(Purchased Reagent)	ent)	Ethyl acetate	2000 ng/mL
							Methyl methacrylate	2000 ng/mL
.mv-571993 00001	12/31/18		RESTEK, Lot A0123796		(Purchased Reagent)	ent)	Acetonitrile	25000 ug/mL
l							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.mv-571994_00001	06/30/20		RESTEK, Lot A0128797		(Purchased Reagent	ent)	Ethanol	100000 ng/mL
.mv-VO-TAOH-5 00004	08/19/18		SPEX, Lot TS180220004		(Purchased Reagent)	ent)	cis-1,4-Dichloro-2-butene	1000 ug/mL

#### Reagent

LC11CIPF3OUds\_00001



#### CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:

11CI-PF3OUdS

LOT NUMBER:

11CIPF3OUdS0916

COMPOUND:

Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

STRUCTURE:

CAS #:

83329-89-9

CI C C C C C C C C C SO<sub>3</sub>K<sup>+</sup>

MOLECULAR FORMULA:

C,F,CISOK

MOLECULAR WEIGHT:

670.69

CONCENTRATION:

50.0 ± 2.5 µg/ml (K Salt)

SOLVENT(S):

Methanol

47.1 ± 2.4 µg/ml (11CI-PF3OUdS anion)

CHEMICAL PURITY:

.

LAST TESTED: (mm/dd/yyyy)

09/30/2016

EXPIRY DATE: (mm/dd/yyyy)

09/30/2021

>98%

**RECOMMENDED STORAGE:** 

Store ampoule in a cool, dark place

#### **DOCUMENTATION/ DATA ATTACHED:**

Figure 1: LC/MS Data (TIC and Mass Spectrum)

Figure 2: LC/MS/MS Data (Selected MRM Transitions)

#### **ADDITIONAL INFORMATION:**

See page 2 for further details.

This compound is a minor component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B G Chittim

Date: 10/1

10/19/2016

#### INTENDED USE:

The products prepared by Wellington Laboratories inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compound it contains.

#### **HAZARDS:**

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

#### SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

#### **HOMOGENEITY**;

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

#### **UNCERTAINTY:**

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty,  $u_{x}(y)$ , of a value y and the uncertainty of the independent parameters

x, x, ...x on which it depends is:

$$u_c(y(x_1, x_2, ... x_n)) = \sqrt{\sum_{i=1}^n u(y_i, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

#### TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

#### **EXPIRY DATE / PERIOD OF VALIDITY:**

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

#### LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

#### QUALITY MANAGEMENT

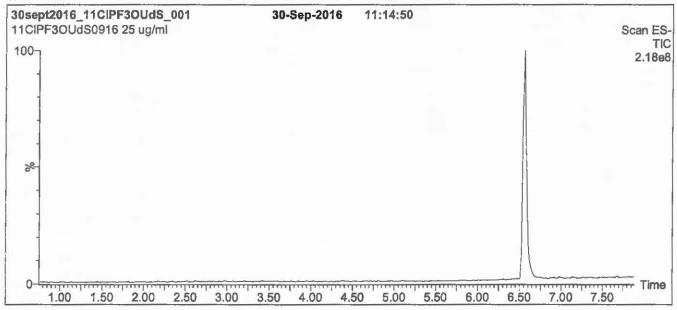
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

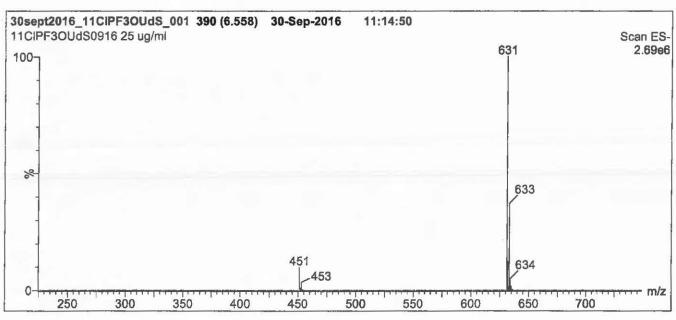




\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at <a href="www.well-labs.com">www.well-labs.com</a> or contact us directly at <a href="mailto:info@well-labs.com">info@well-labs.com</a>\*\*

Figure 1: 11CI-PF3OUdS; LC/MS Data (TIC and Mass Spectrum)





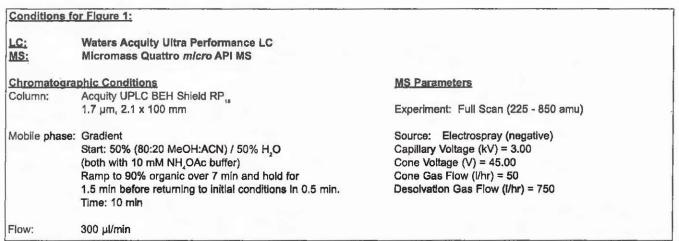
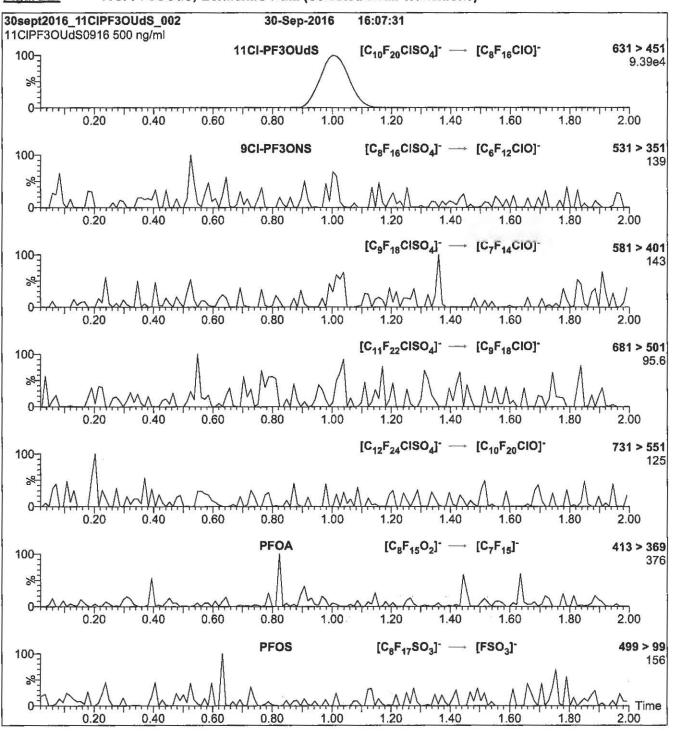
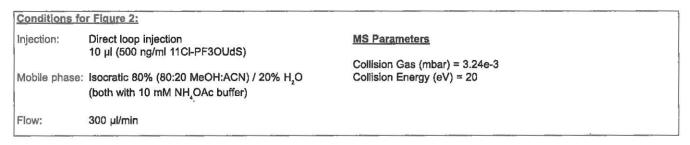


Figure 2: 11CI-PF3OUdS; LC/MS/MS Data (Selected MRM Transitions)





#### Reagent

LC4:2FTS\_00003